3. The outlay abstracted above is shown in the following statement divided under the different projects:—

100 mm 10	Dt	ring 1898.	.99.	То	end of 1898	-99.
Works.	Direct charges.	Indirect charges.	Total.	Direct charges.	Indirect charges.	Total.
1	in g noù	8	e viz	5	6 6	7
Major Irrigation Works-	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa Canals	67,748	2,322	70,070	2,57,88,378	5,84,778	2,63,73,151
Midnapore Canal	oss.F. 00-20			82,80,766	1,84,661	84,65,427
Hijili Tidal Canal				25,51,729	63,513	26,15,242
Sone Canals	()31,444	393	()31,051	2,59,43,002	9,17,496	2,67,60,498
Total	36,304	2,716	39,019	6,24,63,875	17,50,443	6,42,14,318
Minor Works and Navigation-	3882 513				a dedi	A. 1945
Tirhut project	Section of the last	****		5,31,425	74,650	6,06,075
Damodar project	(-)1,200		(-)1,200	1,39,141	16,239	1,55,380
Calcutta and Eastern Canals	64,993	1,293	66,286	63,69,011	92,241	64,61,252
Orissa Coast Canal	14,838	98	14,936	44,25,796	1,06,616	45,32,412
Saran Canals	15,001	- 13	15,014	6,94,392	27,196	7,21,588
Total	93,632	1,404	95,036	1,21,59,765	3,16,942	1,24,76,707
GRAND TOTAL	1,29,936	4,119	1,34,055	7,46,23,640	20,67,385	7,66,91 025

REVENUE.

4. The statement below shows the totals for the last five years of the receipts, working expenses, and interest charges for Major Irrigation Works:—

Particulars.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
. 1	2	3	4	6	6
Receipts from all sources (less refunds of revenue)	Rs. 15,20,127	Rs. 15,07,729	Rs. 19,02,205	Rs. 21,72,182	Rs. 18,39,942
Working expenses (direct and in- direct charges)	14,62,049	13,84,340	13,66,707	14,37,681	14,27,467
Net revenue Charges for interest	58,078 24,81,895	1,23,389 24,94,499	5,35,498 24,98,009	7,34,501 24,97,817	4,12,475
Deficit	24,23,817	23,71,110	19,62,511	17,63,316	20,85,353
Rate per cent. on Capital outlay	3.79	3.69	3.05	2.74	3.25

5. The financial results of Major Irrigation Works to the end of the year FINANCIAL RESULTS.

	e ela June a		Major Irrigation Works Rs.
Direct revenue			3,21,18,203
Working expenses (direct charges)		destil Regimen	2,92,95,827
Results on direct charges only		Profit	28,22,376
Indirect charges debitable to revenue			17,55,835
Results on both direct and indirect char	ges	Profit	10,66,541
Charges for interest on Capital			5,86,06,72 6
Net results, including interest to end of	1898-	99 Loss	5,75,40,185

6. The financial results to the close of the year 1898-99 of Minor Works and Navigation are shown below:—

	Works for which capital and revenue accounts are kept.	Works for which only revenue accounts are kept.
	Rs.	Rs.
Direct revenue	. 2,60,38,981	92,91,127
Working expenses (direct charges)	. 1,15,62,792	54,33,788
Results on direct charges only Profit	1,44,76,189	38,57,339
Indirect charges debitable to revenue	3,55,125	2,95,150
Results on both direct and indirect charges Profit	[2] 아이들은 아이들은 얼굴은 아이들은 사람이 하는	35,62,189

	0	RISSA	CANAI	8.	Mr	MIDNAPORE CANAL.			Set Lin	Sone Canals.				TOTAL.			
YEAR.	Kharif.	Rabi.	Perennial.	Total,	Kharif.	Rabi.	Perennial.	Total,	Kharif, in- cluding five- year and long-	Rabi, including five-year and long-term leases.	Perennial and hot-weather.	Total.	Kharif.	Rabi,	Perennial.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	
1898-94 1894-95 1895-96 1896-97 1897-98	Acres. 100,406 118,116 111,131 171,373 188,041	Acres. 2,904 4,102 7,909 13,300 7,015	216 848 420 375	Acres. 103,526 122,561 119,460 185,048 195,602	Acres. 85,763 69,941 65,251 65,183 72,206	Acres 175	Acres	Acres. 85,763 70,116 65,251 65,183 72,206	Acres. 280,528 258,361 261,485 316,941 299,661	Acres. 66,458 41,664 115,343 215,390 103,371	Acres. 19,790 17,109 18,394 29,825 31,013	Acres. 366,776 317,134 395,222 555,156 433,445	Acres. 466,697 446,418 437,867 553,497 559,308		17,452 18,814 23,200	556,068	
Average of five years.	1137,813 189,134	7,046 5,089	380 624	145,239 194,847	71,669	35 4,160		71,704 - 74,901	283,275 304,778	108,445	21,826 25,983	413,546	492,757 564,653	115,526		2630,489 710,544	

The results of the working of each of the canal systems of the Province during the year will now be described separately, as in previous years.

GENERAL.

In all statements showing totals of receipts or expenditure, the figures are those of the Examiner of Accounts. In dealing with details, the figures of the Superintending Engineer have been taken.

ORISSA CANALS.

CAPITAL

8. The Capital, Interest, and Revenue Accounts of these canals are given below:—

I.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1898-99.	Outlay to end of 1898-99.
1 manifestation	2	3
DIRECT CHARGES.	Rs.	* Rs.
I.—Works	. 72,229	1,88,53,980
II.—Establishment	. 16,495	46,81,444
III.—Tools and plant	. 1,034	20,71,663
IV.—Suspense accounts	. (-)22,010	16
Loss by exchange		2,68,070
Total	67,748	2,58,75,173
V.—Less—Receipts on Capital Account		86,795
Net total Direct Charges	. 67,748	2,57,88,378
		A section of
Indirect Charges.	*	
Capitalization of abatement of land-revenue	. 13	33,246
Leave and pension allowances	2,309	5,51,527
Total Indirect Charges	. 2,322	5,84,773

The construction estimate of these canals is closed. The works carried out during the year at a cost of Rs. 72,229 chargeable to the open Capital Account under the head 43—Minor Works and Navigation, were the construction of permanent outlets, Minor distributaries and village channels, and the restoration of the flood bank of the Kendrapara Extension Canal between Marshaghai and Jumboo which had been wrecked by the flood of July-August 1896. The last work was practically completed within the year.

INTEREST ACCOUNT.

2.-INTEREST ACCOUNT.

		Rs.
Interest charges to end of 1897	7-98	 2,27,67,013
Ditto for 1898-99	•••	 2,27,67,013 10,30,180
and the second second second second second	Total	 2,37,97,193

3. -REVENUE ACCOUNT-(Actuals.)

arty to exercise and	Exper	NDITURE-	treat yan wika	RECEIPTS-		
Particulars.	During 1897-98.	During 1898-99.	PARTICULARS.	During 1897-98.	During 1898-99.	
1	2	- 3	4	5	6	
DIRECT CHARGES.	Rs.	Rs.	The sale was	Rs.	Rs.	
I.—Works, mainten ance, and repairs II.—Revenue management.	4,15,789 89,326	3,78,227 83,309	Water rates Navigation	3,14,729 2,11,279	2,72,832 1,72,649	
Total Direct Charges	5,05,115	4,61,536	Miscellaneous	28,749	24,523	
INDIRECT CHARGES	34,804	33,677	Total	5,54,757	4,69,554	
Total Working Expenses Net revenue	5,39,919 12,005	4,95,213 (—)29,721	Less—Refunds of revenue.	2,833	4,062	
Total	5,51,921	4,65,492	Total receipts	5,51,924	4,65,492	

There was a decrease of Rs. 86,432 in the receipts, and of Rs. 44,706 in expenditure, the result being a deficit of Rs. 29,721, against a profit of

Rs. 12,005 in 1897-98.

9. The following statement compares the earnings with the outlay for the last two years. The term "earnings" as applied to Irrigation denotes the assessed water-rate value of the Irrigation effected during the year; as applied to Navigation, it denotes the amount of tollage assessed during the year together with the actual realizations of miscellaneous revenue charged to year, together with the actual realizations of miscellaneous revenue charged to Navigation. The miscellaneous earnings are the actual receipts during the year under this head:—

		1897-98.	1898-99.
Earnings.		Rs.	Rs.
Irrigation .	TECTS 1	2,71,401	2,70,272
Navigation		2,10,017	1,67,807
Miscellaneous		28,749	21,523
Tota	1	5,10,167	4,62,602
Deduct refunds		2,833	4,062
Net earnings		5,07,334	4,58,540
Outlay	•••	5,39,919	4,95,213
Net deficit		32,585	36,673

FINANCIAL RESULTS.

10. The revenue receipts and working expenses for the last ten years are tabulated below:—

PARTICULARS.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
-1	2	3	4	5	6	7	8	9	10	11
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Water-rates	1,99,844 89,632 15,747	2,09,806 1,21,498 13,708	2,17,256 1,35,902 17,543	3,52,369 1,18,757 26,532	2,09,542 1,43,911 23,122	1,93,550 1,15,201 24,321	2,24,648 1,68,378 24,196	246,777 1,94,100 33,340	3,14,729 2,11,279 28,749	2,72,38; 1,72,646 24,52
Total	3,04,223 99	3,45,012 76	8,71,001 79	4,97,658 283	3,76,575 1,210	3,33,072 727	4,17,222 418	4,74,217 1,270	5,54,757 2,833	4,69,55 4,06
Total receipts	3,04,124	3,44,936	3,70,922	4,97,375	3,75,365	3,32,345	4,16,804	4,72,947	5,51,924	4,63,49
WORKING EXPENSES. Direct Charges. 1.—WORKS, MAINTENANCE AND REPAIRS—		*					A Section	herry the same		
Works (extensions and improvements) Establishment, including Direction and Accounts Tools and plant	2,31,068 1,09,434 19,722	2,22,638 1,32,859 13,951 1,225	5,001 1,70,637 1,19,775 27,023	9,123 2,30,360 1,20,391 19,437	29,355 2,26,362 1,24,048 34,801	6,547 2,28,252 1,09,706 24,532	4,768 1,95,059 1,39,684 22,061	5,859 2,17,693 1,33,432 17,578	15,071 2,18,134 1,59,272 23,312	14,30 1,79,32 1,56,93 27,63
Total	3,60,224	3,70,673	3,22,436	3,79,311	4,14,566	3,69,037	3,61,572	3,74,562	4,15,789	3,78,227
II.—REVENUE MANAGEMENT— Irrigation establishment Navigation ditto	55,502 15,871	52,591 16,119	57,074 16,506	78,996 16,917	73,988 16,840	69,681 17,095	63,239 16,820	72,778 17,135	71,186 18,140	66,114 17,195
Total	71,373	68,710	73,580	95,918	90,828	86,776	80,059	89,913	89,326	83,300
Total Direct Charges	4,31,597	4,39.383	3,96,016	4,75,224	5,05,394	4,55,818	4,41,631	4,64,475	5,05,115	4,61,530
Indirect Charges.			18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			1.77				
Capitalized abatement of land revenue	25,313	28,220	27,070	30,283	30,083	27,507	30,764	31,268	34,804	33,635
Total Indirect Charges	25,313	28,220	27,070	30,283	30,083	27,507	30,764	31,268	34,804	33,677
Total Working Expenses	4,56,910	4,67,603	4,23,086	5,05,507	5,35,477	4,83,320	4,72,395	4,95,743	5,39,919	4,95,213
Net revenue	()1,52,786	(-)1,22,667	(-)52,164	()8,132	(-)1,60,112	(-)1,50,975	(-)55,591	(-)22,796	12,005	(-)29,721

LENGTHS OF CANALS AND DISTRIBUTA-RIES. 11. The following statement gives the lengths of the canals and distributaries and the areas protected, commanded and irrigated during 1898-99, compared with the previous year:—

				1	897-98.		* *					18	98-99.			
NAMES OF CANALS.	Navigable canals.	Canals for irrigation only.	Distributaries with village channels.	Area protected from flood,	Area under command,	Area provided with distri- butaries.	Area irrigated.	Percentage of area irrigated to area provided with distributaries.	Navigable canals.	Canals for irrigation only.	Distributaries with village channels.	Area protected from flood.	Area under command.	Area provided with distri- butaries.	Area irrigated.	Percentage of area irrigat-
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Mahanadi Series. Taldanda	Miles. 512 4 39 24 15 33	Miles 28 47 75	Miles. 100½ 210½ 376 39 108 131½ 965½	Acres. 75,278 97,057 129,421 27,251 65,690 8,960 80,128 483,695	Acres. 75,278 97,057 101,110 58,701 51,520 7,000 48,815	Acres. 24,901 81,681 97,506 21,855 44,959 48,815	Acres. 17,806 32,498 53,223 7,345 15,243 22,052 148,167	71·30 39·78 54·88 33·60 33·90 45·13 46·34	Miles, 513 4 39 24 15 33 1663	Miles. 28 47 75	Miles. 103 211½ 876 41 108½	Acres. 75,278 115,476 129,421 27,251 65,600 8,960 80,128 502,114	Acres. 75,278 115,476 107,588 53,701 51,520 7,000 48,815 459,378	Acres. 41,825 115,476 107,588 21,436 37,400 47,737 371,462	Acres. 17,982 93,193 52,038 7,310 15,023 22,232 147,778	45 26 46 36 46 38
Brahmini-Byturni Series. High Level Canal, Rango II Ditto, do. III Jajpur Canal	124 19 64		491 791	60,000	10,000 57,500 70,000	44,047 86,987	3,243 -29,193 14,999	66°23 40°55	12½ 19 6½		49½ 80	60,000	10,000 57,500 70,000	4,415 50,313 35,644	3,181 29,248 14,640	1 1 1 1 1 1
Total Brahmini-Byturni Series Total Orissa Canals	38	75	1291	60,000 543,695	137,500 571,981	81,034	47,435 195,602*	58°53 48°88	38 2043	75	1293	60,000 562,114	137,500 596,878	96,372 467,834	47,069 194,847†	d less

N.B.—In column 15 the areas which are under direct command from the Main Canals are included. Column 14 includes areas which cannot be irrigated unless Distributary system is extended.

*Includes the chaukidars' jagir lands, but excludes areas, of which remission on account of non-irrigation was given.

† Ditto ditto ditto on which the rates were not accessed on account of non-irrigation.

During the year there was no change in the lengths of the canals. In the length of distributaries there was an increase of $6\frac{1}{2}$ miles, due to the construction of minors. The areas shown as commanded and provided with distributaries were revised, as those shown last year were found to be incorrect.

The Superintending Engineer gives, on page 5 of his report, a statement which has been prepared to show the land commanded by the canals which is suitable, or otherwise, for irrigation. The following statement, which has been prepared from it, is interesting as showing the area which is likely to be irrigated ultimately :-

		Acres.	Percentage of gross area.
Gross area commanded by the canals Area which has been provided with distri- butaries	ing foreign surveys and	562,114	100.0
(a) Area which has been found irrigable at the full rate		467,834	83.2
(i.e. land which more generally requires irrigation) (b) Area found irrigable at reduced rate (i.e. land which rarely	207,326		36.8
requires irrigation)	21,640	***	3.8
Area which for one reason or another has		228,966	40.6
been classed as not suitable for irrigation This shows that about 40 per		238,868	42.4

This shows that about 40 per cent. of the gross area commanded by the canals, or about half the area commanded by existing distributaries, is suitable for irrigation. The remainder for one reason or another is not suitable or does

not need irrigation.

12. The number of permanent and temporary outlets which were in use

during the year are given in the following table:

Division.	Canal system.	Permanent outlets.	Temporary outlets.	Total.	Total area irrigated.	Average area per outlet
1	2	3	4	5	6	7
		No.	No.	No.	Acres.	Acres.
Mahanadi	Taldanda	62	426	488	17,982	37
	(Machgong	95	1,618	1,113	33,193	30
	Kendrapara	181	2,560	2,741	52,038	19
Brahmini-Byturni	Gobri	. 1	129	130	3,708	28
	Do. Extension		102	102	3,602	35
	Pattamoondi	8	487	445	15,023	34
	High Level Canal, Range I	209	. 309	518	22,232	43
equapada-Jajpur	Ditto, do. II		33	33	3,181	96
1 - Paul Cajpar	Ditto, do. III	3	280	283	29,248	103
	[Jajpur		307	307	10,624*	35
	Total, 1898-99	559	5,601	6,160	190,414*	31
	, 1897-98	525	5,793	6,318	195,602	31
*	,, 1896-97	524	5,895	3,419	185,048	28

Norg.—In the case of the Jajpur Canal the area of the kharif season only is taken, as the rabi irrigation is done through.

During the work of the Jajpur Canal the area of the kharif season only is taken, as the rabi irrigation is done through by written outlets.

e years considerable number of permanent outlets was built in the Mahanadi Division and some in the Brahmini on. The total increase was 34 compared with the previous year. In temporary outlets there was a decrease of 192.

13. The average rainfall of the last five years at thirteen stations, situated within the canal-irrigated area, is shown below for the kharif and rabi seasons :-

			Average	OF THIRTEEN	STATIONS.	
		1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
	1	2 .	3	4	5	6
Kharif season	July August September October	Inches. 16:34 9:59 6:79 6:37	Inches. 8·89 15·91 8·37 5·46	Inches. 13.93 15.63 9.42 0.02	Inches. 13:71 12:23 7:48 9:31	Inches. 9:34 18:14 8:70 10:68
	Total	39.09	38.63	39.00	42.73	46.86
Rabi "	November December January February	3·07 0·03 0·02 0·60	0.41	0·03 0·01 2·87	1·72 0·12 	0·18 0·06 0·37
	Total	3.72	0.41	2.91	1.91	0.61
	Whole year	58.91	63:12	65.86	55.99	58.87

The average fall for the year was 58 87 inches, as compared with a mean average for the last 30 years of 57.45 inches. The average rainfall recorded at nine stations in the Central Provinces, from which area of country the Mahanadi river derives the greater part of the supply, was 48.68 inches in 1898-99, as compared with 52.45 inches in 1897-98.

14. The assessed areas for the last ten years, with the yearly rainfall,

IRRIGATION.

are shown in the following statement: --

YEAR.	Kharif.	Rabi.	Perennial or sugarcane.	Total.	Rainfall	
1	2	3	4	5	6	
	Acres.	Acres.	Acres.	Acres.	Inches.	
1888-89	156,319	2,779	194	159,292	49.07	
1889-90	180,568	5.897	162	186,627	67.95	
1890-91	175,829	4,250	220	180,299	63 17	
1891-92	173,453	3,943	289	177,685	61.03	
1892-93	158,025	2,594	333	160,952	56.43	
1893-94	100,406	2,904	216	103,526	74.83	
1894-95	118,116	4,102	343	122,561	58.91	
1895-96	111,131	7,909	420	119,460	63.12	
1896-97	168,533	13,121	375	182,029	65.86	
1897-98	185,158	6,972	546	192,676	55.99	
Average of pre- vious five						
years	136,669	7,001	. 380	144,050	63.74	
1898-99	186,171	5,054	624	191,849	58.87	

Note.—The area irrigated during the year was 194,847 acres, against 195,602 in 1897-98. These s include chaukidars' jagir lands which were excluded from assessment (vide paragraph 11).

The area assessed was 827 acres less than the year 1897-98, which showed the largest figure on record since the opening of the canals for irrigation, but it exceeds the average of the previous five years by 47,799 acres.

The Superintending Engineer says :-

"The total area assessed is slightly below that of the previous year, owing to a smaller rabi irrigation. This is always liable to fluctuations. It is almost entirely dalwa (spring) rice situated in tracts open to floods, and at present we have no proper channels for leading the water to the tracts for which it is wanted. A scheme is under consideration for making a channel for this purpose, which, if it can be carried out, at not too great cost, should lead to an extension of rabi irrigation."

15. The following statement shows the details of the assessments, as compared with the figures of the two preceding years:—

ASSESSMENT.

	Rate per	189	6-97.	1897-	98.	1898	3-99.
Crop.	acre.	Area.	Amount.	· Area.	Amount.	Area.	Amount.
1	2	3	4	5	6	7	8
	Rs. A. P.	Acres,	Rs.	Acres.	Rs.	Acres.	Rs.
Kharif {Flow		130,504	1,97,590	164,819	2,47,548	165,026	2,47,946
Dhoya (Flow	1 0 0 0 8 0 6 0 0	13,287 350	6,656 1,788	19,177 500	9,584 2,209	19,749 622	9,942 3,048
CLIII	4 0 0 0 8 0 0 8 0	24	121	Ξ	=		
Rabi Flow	to 2 0 0 0 0 0 5 0	}				24	39
(Lift	{ to	}		***		•••	
Dhoya	0 8 0 f	31	51				1
Additional kharif demand Flow assessed after the close of	AND THE RESERVE	20,173	35,119	1,055	1,519	1,178	1,594
the year. Additional perennial crops Flow assessed after the close of		4,569 1	2,583	107 46	52 228	218 2	101 10
Additional rabi assessed Flow after the close of the year. Dhoya		13,064 26	19,565	6,972	10,261	5,030	7,592
Total .		182,029	2,63,420	192,676	2,71,401	191,949	2,70,272

The total areas leased and assessed, as compared with the previous year, are shown below:—

	189	7-98.	189	8-99.
Crops.	Leased.	Assessed.	Leased.	Assessed.
1	2	3	4	5
	Acres.	Acres.	Acres.	Acres.
Long leases Season leases.	189,451	185,097	191,019	186,058
Sugarcane Rice, Autumn Rabi (including dalua rice) Unauthorised rice	546 61 10,051	546 61 6,972	624 113 5,122	624 113 5,054
Total "	200,109	192,676	196,878	191,849

The Superintending Engineer thus explains the difference between the areas leased and assessed:—

"The difference in the areas of long leases shown as leased and assessed is due to the exclusion from assessment of chaukidars' lands of 2,998 acres and to the non-assessment of lands which have been remitted as not irrigable, although they had been leased. The leased areas should have been reduced also by the areas so remitted, and instructions are being given to have the recorded areas amended accordingly."

The distribution by divisions and canal systems of the areas leased, irrigated and assessed is given in the following table, in which sugarcane is classed as kharif:—

		100				1898-99.				
DIVISION.	Canal system.		LEASED.			RRIGAT	ED.	Assessed.		
	The state of the s	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total.	Kharif.	Rabi.	Total
1	2	3	4	5	6	7	8	9	10	11
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres	Acres
BRAHMINI-BY-	Kendrapara	51,944	114	52,058	51,924	114	52,038	51,017	113	F 750KS 500
TURNI.	Gobri	. 3,959	126	4,085	3,582	126	3,708	3,541	126	,
	Do. Extension	. 3,638	14	3,652	3,588	14	100000000000000000000000000000000000000	3,548	14	0,00,
	Pattamoondi	15,100	367	15,467	14,656	367	15,023	14,396	361	3,562
	Total .	74,641	621	75,262	73,750	621	74,371	72,502	614	73,116
MAHANADI §	Taldanda	18,248	7	18,255	17,975	7	17,982	17,705	7	17,712
	Machgong	. 33,357	28	33,385	33,165	28	33,193	32,674	28	32,702
	. Total .	51,605	35	51,640	51,140	35	51,175	50,379	35	50,414
ſ	High Level Canal, Range I	22,268	21	22,289	22,211	21	22,232	21,826	21	21,847
ACQUAPADA-JAJ.	Ditto, do. II	2,996	213	3,209	2,995	186	3,181	2,937	182	3,119
	Ditto, do. III	29,442	216	29,658	29,038	210	29,248	28,685	206	28,891
i,	Jaipur	10,804	4,016	14,820	10,624	4,016	14,640	10,466	3,996	14,462
	Total	65,510	4,466	69,976	64.868	4,433	69,301	63,914	4,405	68,319
	GRAND TOTAL	191,756	5,122	196,878	189,758	5,089	194,847	186,795		191,849

* Includes Perennial.

DUTY OF

16. The statement below shows the duties obtained in the kharif season on each of the canals:—

	Supply at head.	Supply used for irrigation.	Duty on supply used.	Rainfall for period.
1	2	3	4	5
	Cubic feet. per second.	Cubic feet per second.	Acres per second.	Inches.
Taldanda system Kendrapara " High Level Canal, Range I Ditto, do. II Ditto, do.III Jaipur Canal	759 1,117 300 35 238 113	653 1,031 153 35 238 90	78 71 145 85 122 118	46.96 46.08 37.44 35.83 37.62 42.63

The figures are of little value, as any duties calculated on averages are misleading. There was no opportunity of testing the real duty during a period of pressure, which is the only true test, as there was ample rain in October.

Some observations on the quantity of water required during the period when the rice is being ploughed in or transplanted in July and August were made in the Jajpur subdivision by Babu Kristo Dhone Banerjee, Supervisor. These showed that in the absence of rain, or with only slight assistance from rain, a duty of only 58 acres per cubic foot per second, as measured at the outlet, was obtained.

Details of the duty on each distributary are given in Appendix I. Until the outlets are adjusted so as to be suitable to the areas to be irrigated, and the supply in the distributaries can, consequently, be better regulated, the results obtained have but little value.

SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899. 2055

17. The following table gives the general results for the year 1898-99 CROP EXPERIof the crop experiments, classed under broadcast and transplanted rice:—

				IRR	IGATE	D LAN	DS.				See Star			UNIR	RIGA	TED L	ANDS.			
Division.	f ex-		BROAT	DCAST.		ex-	Ti	RANSP	LANTE	D.	ex-		Broa	DCAST.		ex-	T	RANSP	LANTE	D.
	Number of periments.	Paddy. Straw. Paddy. Straw. Mds. Srs. Mds. Mds. Mds. Srs. Mds. Mds. Mds. Mds. Mds. Mds. Mds. Md	aw.	er of	Paddy.		Paddy, Straw.		r of ents.	its.		Paddy. Straw								
	Mds. Srs. Mds. Srs.	Numb	Mds.	Srs.	Mds.	Srs.	Number	Mds.	Srs.	Mds.	Srs.	Number	Mds.	Srs.	Mds.	Sre				
1	2	3	•	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
nadi	15	18 26 20	25 6 8	29 41 85	32 20 28	4 6 	13 25	19 9	29 48	30 29	13 15 24	10 16 14	20 27 17	18 29 22	16 14 3		14	20	16	39
Average per acre	56	21	16	35	31	10	20	21	41	5	52	14	7	23	10	5	14	20	16	39

A general abstract of the results of all the experiments made in the year under review is given in the following table: -

Division.	Number of experiments.	AVERAGE OUT- TURN PER AGRE FROM IRRIGATED LAND. DRY WEIGHT.		Number of experiments.	AVERAGE OUT- TURN PER ACRE FROM UNIRRI- GATED LAND. DRY WEIGHT.		TORS OF	CULTIVA- OUTTURN RRIGATED ER ACRE.	VALUE TO CULTIVA TORS OF OUTTURN FROM UNIRRIGATE: LAND PER ACRE.		
1	Number of	Rice, 4rds of paddy,	Straw.	Number of e	Rice, 4rds of paudy.	Straw.	Rice at 21 seers per rupee.	Straw at 9 maunds per rupee.	Rice at 21 seers per rupee.	Straw at 9 maunds per rupce	
1	2 .	8	4	5	6	7	8	9	10	11	
Mahanadi Brahmini-Byturni Acquapada-Jajpur	18 21 27	Mds. 12 17 13	Mds. 30 41 36	13 20 24	Mds. 7 11 10	Mds. 18 26 22	Rs. 94 35 26	Rs. 3 5 4	Rs. 14 22 20	Rs. 2 3 2	
Average	- 66	14	37	57	9	22	28	4	18	2	
Average for 1893-94 1894-95 1895-96 1896-97 1897-98		11:30 19:59 17 17 17	24*56 50*38. 37 38 29		9*06 17*68 15 14 15	21.62 37.91 33 38 28	25*29 32*86 26 32*4 32	2·73 5·60 4 4·2	20-25 29'82 23 26'6 27'3	2.40 4.24 4 3.7 3	

The Superintending Engineer writes:-

"The result generally indicates that the crops, both irrigated and unirrigated, were inferior to those of the previous three years, and this, I understand, is the general opinion among the rice merchants. The difference in favour of the irrigated crops is very marked, but our experiments are on too small a scale to be of any great value, though they are undoubtedly of some use as giving indications of the comparative yield."

The average value of the rice outturn from the irrigated lands in Orissa is given by the Superintending Engineer as Rs. 28 per acre, while from the unirrigated lands it is given as Rs. 18 per acre.

rigated lands it is given as as. To per acre.

18. The demands, collections, and balances of water-rates are shown ASSESSMEN AND COLLECTIONS. below for the last five years :-

Y	YEARS. Amount outstanding at commencement of the year.		Amount falling due during the year.	lling due during for		Remitted or written off.	Balance at the end of the year
1 3 200 200 - 10 1	1	2	3	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1894-95 1895-96 1896-97 1897-98 1898-99		63,350 32,140 34,343 4,597 664	1,68,449 2,31,727 2,35,517 3,16,520 2,73,191	2,31,799 2,63,867 2,69,860 3,21,117 2,73,855	1,93,550 2,24,648 2,46,777 3,14,729 2,72,282	6,109 4,876 18,486 5,724 1,473	32,140 34,343 4,597 664 Nil

There was no outstanding balance at the end of the year. This is very satisfactory and reflects much credit on the Deputy Collector, Babu Madhub Lall, and his staff. The demands were collected from more than 150,000 persons

Of the total Rs. 1,473 remitted and written off, Rs. 1,338 were classed as remission, and Rs. 135 written off as irrecoverable. Including miscellaneous revenue, the total amount realized by the Deputy Collector was Rs. 2,73,211,

as against Rs. 3,25,336 realized in the previous year.

19. The amount of certificate work done in each district is shown in CERTIFICATES. the following statement:-

		Cur	TACK.			BALA	SORE.			To	TAL.	No.
	1897	-98.	1898-99,		1897-98.		1898-99,		1897-98.		1898-99,	
4.	Number.	Amount.	Number.	Amount,	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amoun
1	2	3	4	5	6	7	8	9.	10	11	12	13
Cases for disposal—		Rs.		Rs.		Rs.		Rs.		Rs.		Rs.
1. Cases pending at the close of the preceding year	2	23	100 100 100 100 100 100 100 100 100 100						2	23		
2. Cases instituted during the year	960	10,740	614	4,940	207	1,932	72	940	1,167	12,681	686	5,880
Total	962	10,772	614	4,940	207	1,932	72	940	1,169	12,704	686	5,880
Cases disposed of— 1. By being struck off	23	669	12	12	7	270			30	940	12	12
2. Wholly satisfied	939	10,103	602	4,928,	200	1,662	72	940	1,139	11,764	674	5,868
Total	962	10,772	614	4,940	207	1,932	72	940	1,169	12,704	686	5,880
Balance		100000										

The number of certificate cases instituted has shewn a marked decrease for some years past. This is most satisfactory and the Chief Engineer trusts that the decrease will still continue, as there is yet room for improvement. During the year under review the number of cases instituted was 686 against 1,167 in the preceding year, showing a decrease of 481 cases. The certificate process was only resorted to in extreme cases after every other effort to collect the water-rates had failed. There were no certificate cases pending at the close of the year under review, and in no case was any landed property sold

COMPLAINTS.

or any defaulter sent to jail.

20. The following table shows the number of objections filed against assessment and disposed of during the year:—

	1	ORDINARY	REMISSIONS		11 to VC	THER COM	IPLAINTS.	g the	ar.
W.	during and pend- n previous	How disp	How disposed of-		urine pend- evious	1		l durin	nd of ye
Division.	Received ditheyear and in a from preyear.	Remission allowed.	Remission refused.	Pending.	Received during the year and pend- ing from previous year.	Disposed of.	Pending.	Total received during the year.	Pending at end of year.
1	2	3	4"	5	6	7	8	9	10
and the state of	No.	No.	No.	No.	No.	No.	No.	No.	No.
Mahanadi	194	83	110	1	57	57		251	
Brahmini-Byturni	201	71	130		22	20	2	221	
Acquapada-Jajpur	224	184	82	8	24	24		242	
levenue	271	224,	42	5	166	163	3	418	1
· Total	890	512	364	14	269	264	5	1,182	19

The total number of cases received during the year was 1,152, as compared with 1,737 in the previous year. The number pending at the end of the year was reduced from 29 to 19: this is a moderate number.

21. The statement below gives the details of the amounts remitted and REMISSIONS. written off as irrecoverable during the year, on account of water-rates, &c., which were adjusted in the accounts by a reduction of demand, compared with the figures of the previous year:-

Revision of Assessment.

	(a) Unirrigated crops (b) Damage ,, (c) Chaukidar's jagir		 :::	1897-98. Rs. 2,220 461 42	1898-99. Rs. 1,199 43 28
		Total		2,723	1,270
18.		S-111			
		emissions.			
	(d) Waste land (e) Land occupied by canals (f) Twice assessed (g) Change of rates (h) Erroneous assessments (i) Loss of crops (j) Error in accounts	Total		34 149 2,368 83 349 2,983	40 9 3 2 14
		Written off.		-	
	Irrecoverable demands			20	135
Dedu	ct remissions under Miscellane	Total ous Revenue	t tella	5,726	1,473
Refu	nds authorised Net R	emissions		5,726 2,536	1,473 3,328
G.03	Grand	TOTAL		8,262	4,801

The amount allowed to be written off as irrecoverable is insignificant and the fact is satisfactory. The account furnished by the Deputy Collector as to the progress made in paying out the amounts authorised to be refunded, is as follows:

D .			Rs.
Balance on books as on 1st April 1898			895
Refunds authorised during year	in 1.00	•••	3,328
Payments 1 1	Total		4,223
Payments made during year	•••		8,995
Balance on books on 31st March	n 1899		228

This shows an improvement, and the accounts of these payments and of

balance unpaid are now being kept in a more methodical manner.

22. There were no appeals to the Collectors of districts from the orders APPEALS. of Canal officers during the year. Eight cases were dealt with by the Superintending Engineer in revision of the proceedings of Divisional Officers. In two cases the decision of Divisional Officers was revised, and in six it was upheld.

23. Criminal cases.—In the Mahanadi Division there were three cases instituted, in two of which convictions were obtained and the third was dismissed. In the Brahmini-Byturni Division three cases were instituted, and in the Acquapada-Jajpur Division two cases, in all of which convictions were obtained. The cases were not of a serious nature.

REVENUE ESTABLISH-MENT.

24. The cost of the Revenue Establishment for the last five years is shown below:-

	1894-95.	1895-96.	1896-97.	1897-98.	1898-99
1	2	3	4	5	6
Establishment under Deputy Collector.	Rs.	Rs.	Rs.	Rs.	Rs.
Permanent establisment, including travelling allowance.	43,679	42,735	43,840	46,942	46,572
Temporary establishment	11,166	6,161	14,812	7,886	4,221
Contingencies	3,206	2,457	2,634	3,346	2,520
Headmen's fees	80	172	48	12	
Establishment under Executive Engineer.				ager or	
Permanent and temporary establishments, including travelling allowances.	8,568	8,905	8,623	9,653	9,266
Water-regulation establishment	2,982	2,809	2,821	3,347	3,535
Total	69,681	63,239	72,778	71,186	66,114
Collections of water-rates and miscellaneous revenue.	2,12,178	2,43,076	2,63,800	3,25,336	2,73,211
Percentage	32:8	26.01	27.58	21.88	24.19

There was a reduction in the cost of both permanent and temporary establishments employed under the Deputy Collector and the Executive Engineers which is so far satisfactory, but the Chief Engineer considers that there is room still for further economy in these establishments. A slight increase took place in the water-regulation establishment.

25. The following statement shows the receipts from "Navigation" for the last five years:—

NA VIGATION.

			CA	DANDA NAL STEM.	C	DRAPARA CANAL YSTEM.	C	H LEVEL	CA	LEVEL NAL, GE II.	UA	LEVEL NAL, E III.	JA.	PUR NAL.	To	TAL.
	YEAR.		Number of miles open,	Tollage receipts.	Number of miles open,	Tollage receipts.	Number of miles open.	Tollage receipts.	Number of miles open.	Tollage receipts.	Number of miles open.	Tollage-receipts.	Number of miles open.	Tollage receipts.	Number of miles open.	Tollage receipts.
	1		2	8	4	5	6	7	8	9	10	11	12	/13	14	15
			No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.	No.	Rs.
893-94		***	554	14,369	78	83,905	33	14,616	121	3,691	19	2,026	61	508	2002	1,19,110
894-95		***	558	16,024	78	65,090	33	10,587	121	2,561	19	1,507	61	451	2044	96,220
895-96	***	***	554	15,911	78	1,04,522	33	15,881	124	3,890	19	1,989	6	424	2042	1,42,61
1896-97	***	•••	554	28,366	78	1,04,986	33	20,051	121	3,613	19	935	64	311	2/042	1,58,263
1897-98	•••	•••	554	18,787	78	1,16,580	33	23,814	121	3,554	19	1,120	61	314	2041	1,64,16
1001-00		- 1999	554	22,236	78	88,313	33	21,466	124	3,148	19	813	61	341	2042	1,36,31

The receipts during the year were considerably less than in the previous This was chiefly due to the opening of the Bengal and Nagpur Railway. Regarding the articles of traffic carried on the canals, the Superintending Engineer writes:-

"There was a large reduction in the rice carried, due to slackness in the export trade from Orissa. The reductions in metals and building materials are due to less materials for the

railway works having been brought over the canals.

There was some increase in oilseeds, salt and miscellaneous goods, but generally traffic was slack. The railway was open for goods traffic for a few months at the close of the year under review, but it cannot be said to have as yet had any effect on the goods traffic over

The number of passengers carried during the year was 138,277 against 173,152 in the previous year, showing a reduction of 34,875. This was caused by the opening of the railway. It is probable that before long the passenger traffic on the canals will be almost entirely diverted.

The traffic on the Orissa Canals is detailed below for the last ten years,

the Transport Service being excluded:-

	1889-90,	1890-91.	1891-92.	1892.93.	1893-94.	1894-95.	1895-96,	1896-97.	1897-98.	1898-99.
1	2	3	4	5	6	7	8	9	10	11
umber of miles open No. il collections Rs. ate of toll per mile umber of boats plying rango and passengers in-	177 78,039 440 9	1,06,961 604·3	204‡ 1,20,761 589*8	2044 1,00,503 490°8	2042 1,19,115 581.7	2042 96,220 469 9	2043 1,42,617 696.5	2041 1,58,262 770°9	1,64,169 801.9	204 1,36,317 665*7
cluding empties No. anage of cargo and pas-	25,183	21,737	21,742	21,603	22,982	19,670	25,185	25,546	25,121	26,028
empties Tons timated value of cargo, acluding rafts Rs.	237,599 48,68,255	314,249 85,21,551	332,423 95,49,756	297,109 84,69,728	309,748 71,69,437	239,005 51,72,772	346,932 77,69,283	387,038 1,00,14,777	546,766 1,17,13,163	357,181 1,00,83,914

26. The total receipts from the Transport Service amounted to Rs. 36,332 against Rs. 47,110 in the previous year, showing a decrease of Rs. 10,778. The cost of working the Transport Service was Rs. 15,989 for establishments, fuel and stores, and Rs. 4,087 for repairs, in addition to which Rs. 4,073 were spent in fitting up a passenger barge. The service worked at a profit of Rs. 12,183.

The Superintending Engineer states:

"The traffic was well maintained in the early part of the year, but fell off latterly on the temporary opening of the railway for passenger and goods traffic. After December 1899, when the railway will be opened permanently, this service will have to be withdrawn. It can be tried on the Taldanda Canal to see if enough traffic will offer to pay for the

27. The following statement shows the Miscellaneous Receipts in detail for the last five years :-

MISCELLA-RECEIPTS.

TRANSPORT

DETAILS.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99
1	2	3	4	5	6	7	8
Sale of water Plantations Other canal produce Rent of buildings Fines Rent of lands fisheries Cost of process Sale of old materials Other items Total	Rs. 46 1,244 528 4,892 9,247 1,191 4,951 1,023	Rs. 112 2,514 492 5,168 740 5,593 454	Rs. 79 2,520 1,290 4,273 11,129 1,740 2,478 56 591 24,196	Rs. 39 2,998 2,092 5,139 11,052 1,187 2,041 48 8,744	Rs. 57 2,346 1,418 4,800 8,568 1,207 1,524 2 8,829	Rs. 66 2,325 1,165 4.854 9,849 1,213 3,317 29 3,928	Rs. 20 3,628 1,544 4,655 11,784 1,186 560

PLANTATIONS

28. The following table shows the state of the plantations for the last two years:—

Division.	Upwards o	of 12 feet.	Saplings 12 f			gs below eet.	То	tal.
	1897-98.	1898-99.	1897-98.	1898-99.	1897-98.	1898-99.	1897-98.	1898-99
1	2	enghall	4	5	6	7	8	9
Mahanadi Brahmini-Byturni Acquapada	22,587 45,980 18,184	26,118 46,899 19,283	7,801 12,432 4,827	5,378 11,118 6,956	5,269 13,776 4,906	4,077 16,832 6,707	35,657 72,188 27,867	35,568 74,849 32,946
Total	86,701	92,295	25,060	23,452	23,951	27,616	135,712	143,363

The receipts from plantations amounted to Rs. 3,628 against Rs. 2,346 in the previous year. The expenditure under this head chargeable to the Revenue Account was Rs. 1,403 against Rs. 1,033. There was no expenditure under Capital Account during the year.

FLOODS.

29. The maximum flood-levels recorded during the year are compared in the following table with the maximum levels in 1897-98 and with the highest recorded levels:—

in the sign of the		1897-98,	40	1898-99.		HIGHEST RECORD	DED
NAME OF RIVER.	Locality.	Date.	Read- ing.	Date.	Read- ing,	Date.	Read-
1	2	3	٠	.5	6	7	. 8
Mahanadi Brahmini Byturni Salindi Katjuri Beropa Patia {	Naraj above weir Do, below weir Jobra above weir Do, below weir Janapur above weir Acquapada above weir Do, below weir Acquapada above weir Do, below weir Bellevus Jagatpur above weir Do, below weir Jokodia above weir Jokodia above weir Do, below weir	14th August 1897 14th , , , 14th , , , 14th , , , 14th , , , 24th , , , 6th , , , 6th , , , 2nd June 1 14th August , , 15th August , 24th , , , 24th , , ,	86°10 86°05 70°00 68°80 64°70 64°30 58°10 47°80 53°55 75°81 68°05 65°55 63°60 63°10	15th August 1898 15th , , 15th , , 15th , , 9th , , 16th , , 16th , , 16th , , 16th ,	85:30 85:20 70:05 68:55 62:70 62:40 61:65 55:40 56:90 76:25 67:60 65:20 61:90 61:60	26th July 1892 26th , , , 25th 25th 26th 1894 26th 1881 17th 1881 17th 25th July 1892 25th 1896 25th 1896 25th 26th 1894 26th 1894	92*10 92*10 75*95 74*65 69*60 68*60 66*60 63*79 59*78 83*50 72*60 71*60 69*10 68*70

The year under review was marked by an absence of any high floods in any of the rivers, a similar state of things to that which obtained during the previous year.

previous year.

30. The charges for maintenance and repairs of the canals during the year compared with the five previous years are shown in the following statement:—

Charges.	1893-94.	1894-95.	1895-96.	1896-97.	1897-93.	Average of previous five years.	1898-99.
1	2	8	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Extension and improve- ments.	29,355	6,547	4,768	5,859	15,071	12,320	14,300
Head-works	45,757	59,800	57,291	52,859	64,746	56,091	44,615
Main and branch canals		1,21,928	83,277	1,10,116	1,03,547	1,09,253	82,456
Distributaries	29,261	27,950	32,694	31,658	29,445	30,202	28,370
Drainage and protective works.	8,237	5,480	8,946	14,734	11,616	9,803	12,904
Cost of working Transport Service.	15,707	13,094	12,851	8,326	8,780	11,751	10,984
Total	2,55,717	2,34,799	1,99,827	2,23,552	2,33,205	2,29,420	1,93,629

There was a reduction of Rs. 39,576 in the cost of maintenance and repairs, as compared with 1897-98, the chief economy lay in the expenditure on the main canals and on the distributaries.

The chief works carried out under "Extensions and Improvements" were the construction of a boat dock at Rahama on the Taldanda Canal, and a minor distributary from No. 11 distributary, Taldanda Canal; a wooden bridge across the Machgong Canal at Barabag cattle crossing; an extension of No. 11 distributary, Machgong Canal; a syphon under No. 19B.I. distributary, Machgong Canal; an extension of No. 2 distributary, Pattamoondi Canal; and two minor distributaries on the Pattamoondi Canal.

31. The cost of maintaining each of the weirs is shown below:-

Name of weir.	Length.	F	EXPENDITU	RE.	RATE P	ER RUNNI	NG FOOT.
NAME OF WEIL.	Dength.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99
1	2	3	. 4	5	6	7	8
oteller	Feet.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Mahanadi	3,833	3,889 14,018	3,090 20,372	3,652 13,970	1.01 2.21	0.80 3.20	0.96
Beropa	1 020	7,595	6,337	4,415	3.84	3.20	2.20
Barhmini	The state of the s	1,119	3,064	2,258	0.28	0.76	0.56
	. 783	3,200	4,634	6,357	4.09	5.92	8.12
Bytarni	1 500	4,975	2,199	145	4.12	2 19	0.43
Burra	, 526	5,311	1,881	906	10.10	3.57	1.72
Total of all weirs	. 18,497	40,107	41,577	32,003	2.11	2.25	1.73

The expenditure on the weirs during the year was Rs. 9,574 less than the previous year and about Rs. 12,000 less than the average of the previous five years; this is satisfactory.

The miscellaneous charges incurred during the year on head-works, exclusive of those on the weirs, were Rs. 12,750 against Rs. 23,259 and Rs. 13,304 in the years 1897-98 and 1896-97.

32. The following statement shows the expenditure on each canal for the last three years:—

MAIN AND BRANCH CANALS.

Main and Brai	NCH CANAL			Expenditur	R.	RA	TE PER MI	LE.
			1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99
1			2	3	. 4	5	6	7
ndrapara Canal		Miles.	Rs.	Rs.	Rs.	Ra.	Re.	Rs.
Kendrapara Canal Kendrapara Extension Canal Pattamoendi Canal Gobri Canal Gobri Extension Canal Taldanda Canal Machgong Canal High Level Canal, Range Ditto, Ditto, Jajpur Canal		39 15, 47 15 9 513 52 33 12½ 19 6½	35,688 1,838 7,433 6,791 2,919 18,151 9,092 15,085 2,455 4,553 1,4+1	22,826 23,810 6,720 8,428 2,506 15,550 7,643 8,433 1,897 3,789 1,552	21,599 4,202 5,451 7,189 3,082 14,545 8,145 11,028 1,629 3,573 1,873	915 123 156 453 324 351 284 457 196 240 217	123 1,587 156 143 453 562 324 278 351 299 284 239 457 256 196 150 240 199	554 280 118 479 342 280 254 334 130 188
	Total	 2793	1,05,416	1,03,154	82,316	377	368	294

There was a reduction of Rs. 20,838 compared with the previous year.

The reason for increase and decrease of each of the canals is given below :-

Kendrapara Canal.-There was a considerable reduction in the charges

for silt clearance and dredging.

Kendrapara Extension Canal.—The expenditure was normal. In the previous year, the heavy increase in cost was due to special work required for filling in the breaches caused by the flood of July-August 1896.

Pattamoondi Cunal.—'I he expenditure was rather below normal.

Gobri Canal.—The cost of renewing the upper gates of the Kendrapara Lock and the lower gates of the Gundakia Lock, which was incurred partly in the previous year and partly in the year under review, was exceptional; otherwise the expenditure was ordinary.

Gobri Extension Canal.-The expenditure was a little more than in the previous year. The charges for repairs to canal banks were rather high, owing to

the wash of steamers.

Taldanda Canal.—The expenditure was moderate. Some silt clearance was done in the first two miles of the canal where the bed was somewhat choked.

Machgong Canal.—The expenditure was about normal. It was a little more

than in the previous year.

High Level Canal, Ranges I, II and III.—The expenditure was normal and moderate. In Range I the weeds were especially bad, as the canal was kept open throughout without any closure. When the steamer service is withdrawn, it will be necessary to close the canal for a considerable period each hot weather to destroy the weeds.

Jajpur Canal.—The expenditure was a little more than last year. It was

due to substantial repairs to buildings having been carried out.

DISTRIBU.

DRAINAGE AND PROTECTIVE WORKS.

33. The maintenance cost of the distributaries, per mile, is shown below. The average rate of Rs. 26 shows a decrease, as compared with the average mileage rates of 1897-98 and of 1896-97, which were Rs. 27 and Rs. 21, respectively. The cost is less than in the Sone Canals and is extremely moderate:-

		1896-97.			1897-98.	Our has		1898-99.	
	Miles.	Cost.	Per mile.	Miles.	Cost.	Per mile.	Miles.	Cost.	Per mile
A Secret Commence of	2	3	4	R	6	7	8	9	10
DISTRIBUTARIES.	No.	Rs.	Rs.	No.	Rs.	Rs.	No.	Rs.	Rs.
Kendrapara Canal System, including Gobri and Gobri Extension	419 991 2101 1311 491 1065	10,871 2,485 8,662 2,916 2,447 4,062 221	26 25 41 22 49 38	412 1001 2101 1311 494 1050 792	10,183 2,549 4,933 4,517 1,803 2,904 2,555	25 25 23 34 37 27 32	\$20]* 311½ 260½†	14,299 8,629 5,443	27 28 21
Total	1,0094	31,664	31	1,0902	29,444	27	1,0921	28,371	26

Note.—The lengths of distributaries in the above are those which have been brought on the revenue account, and consequently differ from the lengths given in paragraph 13 which include all so far advanced as to be fit for use, whether the capital account is still open or not.

* Includes length of Pattamound canal.

n or not.
Includes length of Pattamoondi canal.
Iucludes length of Jajpur canal.

Regarding distributaries the Superintending Engineer remarks:—

"The expenditure was moderate—indeed, it was, if anything, too moderate, and some of the distributaries require to be brought to a higher standard. It will be as well to spend rather more in these very important works for the next few years. We have now leases nearly up to our full capacity, and it is necessary that the distributaries should be in a posi-tion to carry full supplies."

The Chief Engineer concurs in these remarks: it is always difficult to determine the standard to which distributaries should be maintained, but,

obviously, that standard should enable the channels to be thoroughly efficient.

34. The total expenditure on Drainage and Protective Works was
Rs. 12,904 against Rs. 11,920 in 1897-98. It includes the upkeep of 207½
miles of flood embankments, and 279¾ miles of drainage cuts.

On the Taldanda Canal system the expenditure was chiefly confined

to raising the flood banks along the Suk Pyka river and at Paradip. The

expenditure on the other systems was normal, and does not call for any special

35. The following table shows the cost of silt-clearing and dredging during the year 1898-99:-

	Sii	T-CLEARING		1	DREDGING.	
NAME OF CANAL.	Quantity in cubic feet.	Rate per 1,000 cubic feet.	Cost.	Quantity in cubic feet.	Rate per 1,000 cubic feet.	Cost.
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	3	4	5	6	7
E-1833	C. ft.	Rs.	Rs.	C. ft.	Rs.	Rs.
Taldanda	1,032,270	3.3	3,392	1,73,883	8.6	1,500
Machgong	44,034	3.1	138			•••
Kendrapara	404,325	2.6	1,051	70,210	5.5	386
Ditto Extension	90,896	2.2	200	44,126	5.0	220
Do Entension	391,620	25	979	15,278	60	90
Dattamarrad:	11,050	2.8		17,340	6.3	110
High Level Canal, Range I	215,372	5.1	31	1 00 700	***	***
Ditto, do. II	43,811	4.2	1,089	1,68,709	4.2	711
Ditto, do. III	2,9.0	2.4	7	13,096	4.8	63
Jajpur	12,765	2.4	31	•••	***	•••
Total	2,249,063	3.2	7,101	5,02,642	6.1	3,080
Total, 1897-98	2,154,356	3.80	8,191	5,99,464	7.34	4,400

Some silt was removed from the heads of the Taldanda and Kendrapara Canals and from the head of the Ist Range of the High Level Canal. It was necessary to dredge the head of the Taldanda Canal, as there was an accumulation of sand, which was reducing the discharge and which could not be moved by the flow of the water. The remaining dredging was in the lock entrances and in clearing ring bunds made during closures. The high rate for the silt clearance in the 1st Range, High Level Canal, is due to the work being done without closing the canal. It was really of the nature of dredging, but by the manual labour instead of by steam.

The cost of rasing and removing the silt lifted by steam dredgers is shown in the following table:-

The state of the s		RAISING ST	ILT BY	COST OF REMOVING SILT DREDGED.			
NAME OF CANAL.	Quantity in cubic feet.	Rate per 1,000 cu- bic feet.	Cost.	Quantity in cubic feet.	Rate per 1,000 cu- bic feet.	Cost	
A 77 - 18 - 18 - 18 - 18 - 18 - 18 - 18 -	2	. 3	4	ъб	6	7	
	C. ft.	Rs.	Rs.	C. ft.	Rs.	Rs	
Taldanda Kendrapara Gobri Do. Extension Kendrapara Extension Canal High Level Canal, Range I Ditto, do. II	173,893 70,210 15,278 17,340 44,126 168,709 13,096	4·31 3·75 4·0 4·25 3·25 2·0	750 263 60 75 143 339	173,883 70,210 15,278 17,340 44,126 .168,709	4·31 1·75 2·0 2·0 1 75 2·12	750 123 30 35 77 372	

On the Taldanda Canal the high rate for lifting was due to some expensive works at the terminal lock at Paradip. Here Rs. 199 were spent in raising 18,600 cubic feet of silt, the cost of hauling the dredger 50 miles each way being a considerable item. For the silt taken out of the head of the canal 155,283 cubic feet were lifted at a cost of Rs. 549-12-10, which gives a rate of Rs. 3.55 per 1,000.

CAPITAL ACCOUNT.

MIDNAPORE CANAL.

36. The Capital, Interest, and Revenue Accounts of this canal are given below: -

1.-CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1898-99.	Outlay to the end of 1898-99.
	2	3
Direct charges Less—Receipts on Capital Account	Rs. Nil Nil	Rs. 83,12,324 81,558
Total direct charges	Nil	82,80,766
Indirect charges	Nil	1,84,661

The construction estimate of this canal was closed on 31st March 1889.

There was no expenditure during the year chargeable to Capital Account.

ACCOUNT,

2.-INTEREST ACCOUNT.

Interests charges to end of 1897-98 Ditto for 1898-99	:::		•••	Rs. 83,93,059 3,31,230
the first energy of the second		Total		87,24,289

3.—REVENUE ACCOUNT (Actuals).

ACCOUNT.

	EXPEN	DITURE—	rada Albania Islanda rada Albania Islanda		Весетртв —		
Particulars	During 1897-98.	During 1898-99.	Particulars.		During 1897-98.	During 1898-99.	
i i	2	3	4		5	6	
DIRECT CHARGES.	Rs.	Rs.	100 May 2000		Rs.	Rs.	
IWorks, main-			Water-rates		1,19,909	1,07,554	
tenance, and repairs	1,95,036	2,29,594	Navigation Miscellaneous		1,32,235 23,492	1,03,681 22,537	
II.—Revenue man- agement	34,048						
		35,069	- Total		2,75,636	2,33,772	
Total direct charges	2,29,084	2,64,663					
INDIRECT CHARGES	11,148	9,317			•		
Total working ex-		Tables and				and on the same	
penses Net revenue	2,40,232 35,805	2,73,980 (—) 45,248	Less—Refunds revenue	of 	1,599	5,040	
Total	2,74,037	2,28,732	Total receipts		2,74,037	2,28,732	

37. The earnings of the Canal, i.e., the assessed water-rate value of the irrigation done during the year, the assessed tollage plus the actual miscellaneous receipts under Navigation, and the actual receipts under the head Miscellaneous, are compared below with the actual outlay:—

EARNINGS.	1897-98.	1898-99.
Irrigation Navigation Miscellaneous	Rs. 1,13,079 1,30,514 23,492	Rs. 1,12,841 1,04,528 22,537
Total Deduct refunds of revenue	2,67,085 1,599	2,39,406 5,040
Net earning Outlay	2,65,486 2,40,232	2,34,366 2,73,980
Net earned profit	(+)25,254	(—)39,614

38. The Revenue Receipts and Working Expenses of the Midnapore Canal for the last ten years are exhibited below:-

PARTICULARS.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
1	2	3	4	5	6	7	8	9	10	1 11
RECEIPTS. Water-rates	Rs.	Rs.	Rs.	Rs.	Rs.	, Rs.	Rs.	Rs.	Rs.	Rs.
Navigation Miscellaneous	1,16,424 1,48,164 13,016	1,15,438 1,12,754 9,004	1,32,981 1,32,572 19,147	1,49,057 1,14,141 16,979	1,65,630 1,14,994 24,319	1,36,882 1,35,492 22,308	1.43.918	1,00,618 1,54,215 24,924	1,19,909 1,32,235	1,07,55
Less—Refunds of revenue	2,77,604 181	2,37,196 205	2,84,700	2,80,177 176	3,04,943 174	2,94,682 259	2.63,994	2,79,757	23,492	2,53
Total receipts WORKING EXPENSES.	2,77,423	2,36,991	2,84,697	2,80,001	3,04,769	2,94,423	2,63,633	2,78,667	2,74,037	2,28,73
DIRECT CHARGES. I.—Works, maintenance, and repairs.			la list		400					
Works (extensions and improvements)	 1,13,507 29,753 27,612	1,05,038 39,562 23,929	1,41,262 35,278 51,761	3,736 87,430 34,681 29,885	8,138 1,03,178 22,881 38,788	11,093 1,04,502 29,910 39,599	1,35,047	9,056 1,08,155 43,826	7,001 1,08,697 45,583	10,636 1,63,706 31,485
Total	1,70,872	1,68,529	2,28,301	1,55,732	1,72,985	1,85,104	2,37,163	30,827	33,755	23,776
II.—Revenue manage- ment. Irrigation establishment Navigation ditto Total	21,903 7,719 29,622	22,809 7,711 30,520	21,273	23,011 7,658	20,215 7,857	22,861 8,080	20,532	22,663 8,310	25,176 8,872	2,29,594 26,978 8,091
Total dipart shares	2,00,494		29,023	30,669	28,072	30,941	28,644	30,973	34,048	35,069
Indirect charges	-	1,99,049	2,57,324	1,86,401	2,01,057	2,16,045	2,65,807	2,22,837	2,29,084	2,64,663
Total working expenses	8,312	9,811	9,002	9,149	7,133	8,519	10,306	10,472	11,148	9,317
Not voronno	2,08,806	2,08,860	2,66,326	1,95,550	2,08,190	2,24,564	2,76,113	2,33,309	2,40,232	2,73,980
Net revenue	68,617	28,131	18,371	84,451	96,579	69,859	(-)12,480	45,358	33,805	(-)45,248

On extensions and improvements an expenditure of Rs. 10,630 was incurred during the year against Rs. 7,001 in the previous year. The work incurred during the year against Rs. 7,001 in the previous year. The work carried out was the revetting of portions of the inner slope of the canal banks with laterite stone for protection against erosion caused by the wash of the steamers. The total length of the banks protected was 13,725 feet. The total expenditure, inclusive of indirect charges, was Rs. 2,73,980 against Rs. 2,40,232 in the previous year, or Rs. 33,748 more, which was mainly due to the abnormal flood of June 1898. The total receipts during the year were Rs. 45,305 less than the previous year. The net revenue of the year was a deficit of Rs. 45,248 against a profit of Rs. 33,805 in the year 1897-98.

39. In the following statement are tabulated particulars concerning the I.ENCITHS OF 39. In the following statement are tabulated particulars concerning the canals and distributaries. There has been no change in the lengths of canals and distributaries, or in the areas protected or commanded: and distributaries, or in the areas protected or commanded :-

				180	97-98.							1898	3-99.		
NAME OF CANAL	Navigable canals.	Canals for irriga- tion and navigation.	Distributaries and village channels.	Area protected from floods.	Area under command.	Area provided with distributaries.	Area irrigated.	Percentage of area irrigated to area provided with distributaries.	2	Canals for irriga- tion and navigation.	Distributaries and village channels.	Area protected from floods.	Area under command,	Area provided with distributaries,	Area irrigated.
1	2	8	4	5	6	7	8	9	10	11	12	13	14	15	16
Jnder Midnapore weir Jnder Panchkurah weir Jnder Tidal reaches, Ranges I and II Cotal Midnapore	Miles. 44 12 16	Miles. 44 12 16	Miles, 260°30 35°25 18°00	Acres. 294,400 112,640 30,080	Acres.	Acres. 100,000 23,000 2,000	Acres. 64,002 7,472 732	Acres. 64.00 32.48 36.60	Miles. 44 12 16	Miles. 44 12 16	Miles. 260°30 35°25 18°00	Acres. 294,400 112,640 30,080	Acres.	Acres. 100,000 23,000 2,000	
otal Midnapore Canal	72	72	313'55*	437,120	180,000	125,000	72,206	57.76	72	72	313'55*	437,120	180,000	125,000	74,901

^{*} Of this the length of distributaries is 283 97 miles, and village channels 29 58 miles.

OUTLETS.

40. The following statement shows the areas commanded by the distributaries, and the number of outlets in use:-

PORTION OF CANAL.	Total length of channel.	Area com- manded.	Distance and the same and her	IBER PORARY ETS.	Number of permanent outlets.		
			1897-98.	1898-99.	1897-98.	1898-99.	
1	2	3	4	5	6	7	
Under Midnapore weir Do. Panchkurah weir Do. Tidal reaches, Ranges I and II	Miles. 230·72 35·25 18·00	Acres. 100,000 23,000 2,000	795 } 187	755 187	41	40	
Total	283-97	125,000	982	942	43	43	

There was a decrease of 40 temporary outlets. The number of permanent outlets during the year remained the same as last year. It would appear to be desirable to increase the number of permanent outlet, and the question will be considered.

RAINFALL.

41. The average rainfall of the last five years at four stations within the canal-irrigated area is shown below :-

STATIONS.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.	AVERAGE OF FORMER YEARS.		
			100 mm			No. of years.	Average rainfall.	
1 1	2	3	4	- 5	6	7	8	
	Inches.	Inches.	Inches.	Inches.	Inches.		Inches.	
Midnapore Panchkurah Luchmapur Mowah	71.62 54.22	48·39 31·54 39·50 27·12	50·17 61·61 53·92 54·64	55·32 40·89 48·83 49·03	59·18 48·14 52·55 46·04	30 30 14 14	55·35 54·56 55·63 51·61	
verage	55.90	36.66	55.08	48.52	51.48		54.29	

The rainfall throughout the year was seasonable and favourable for the rice crops. It was heavy in June and August, when 15.64 and 13.82, inches respectively, were registered at Midnapore.

The rainfall in the kharif season was distributed as follows:—

MONTH.	Midna- pore.	Panch- kurah.	Luchma- pur.	Mowah.	Average, 1898-99.	Average, 1897-98.
1	2	3	4	5	6	7
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
July	12.42	9.83	12.71	7.07	10.21	6.96
August	13.82	10.52	10.84	12.03	11.80	10.00
September	8.82	870	7.36	7.93	8.20	5.84
October	4.93	4.73	4.17	3.51	4.34	6.29
Total kharif season, 1898-99.	39.99	33.78	35 08	80.24	34.85	29.09
Do. 1897-98	32.52	26.06	30.62	27.16	29.09	

42. The areas of the crops irrigated during 1898-99 and the ten previous Ibrigation. years, as also the average annual rainfall, are shown below:—

YEAR.	Kharif.	Rabi.	Perennial.	Total.	Rainfall	
1 .	2	3	4	5	6	
	Acres.	Acres.	1929	Acres.	Inches.	
1888-89	66,408	3,369	00000	69,777	62.137	
1889-90	68,370	440	. *	68,810	44.47	
1890-91	82,002	•••		82,002	55.68	
1891-92	+83,905	68		83,973	51.81	
1892-93	91,217			91,217	41.28	
1893-94	79,550	6,213		85,763	70.63	
1894-95	69,941	175		70,116	55.90	
1895-96	65,251			65,251	36.66	
1896-97	65,183			65,183	55.08	
1897-98	72,206			72,206	48.52	
Average of			1881 - 14 1873	ARREST AND ARREST		
previous five years	70,426	1,278		71,704	53.36	
1898-99	70,741	4,160		74,901	51.48	

Average of four stations throughout the irrigated areas under the Midnapore and Panch-kurah weirs.

The total area irrigated during the year was 74,901 acres, including 4,160 acres of boro rice classed as rabi, as compared with 72,206 acres of the previous year, showing an increase of 2,695 acres. There was no rabi irrigation in 1897-98. The area of *kharif* irrigation was slightly less than that of last year.

43. The total area under lease during the year was 76,696 acres, against

72,206 acres in the previous year, showing an increase of 4,490 acres. The following table gives particulars regarding the leases:-

		KHARIF.		Sugarcane			
Particulars.	Long leases.	Annual leases.	Surrepti- tious irrigation.	and other perennial irrigation.	Rabi.	Total.,	REMARKS.
1	2	3	4	5	6	7.	8
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	
Leases in force in 1897-98	71,960	32	214			72,206	1 80
Deduct leases which expired at the end of 1897-98	4,920	32	214	The stands and the		4,566	
Leases in force at the beginning of 1898-99	67,640					67,640	
Deduct area cancelled and deducted during the year	811					811	
Net area	66,829	*** O C B C C T		TRITTILE E		66,829	
Leases executed during 1898-99 (area under provisional licenses and area brought under lease directly, together with the increased area brought under lease after measurement).	5,707		iliya okuselal ca		4,160	9,867	
Leases in force during	72,536*		d against	10797	4.160	76,696	
Deduct leases and provisional license which will expire at the end of 1898-99	3,134		Complete	#16 277 - 100 116 277 - 100	4,160	7,294	
Leases in force at the begin- ning of 1899-1900	69,402	·	·			69,402	1281 1282 32 1

Out of this leased kharif area, 1,795 acres which were not irrigated during the year owing to damage done by floods were excluded from assessment.

The Superintending Engineer states:-

"It will be seen from the above table that the area leased under kharif was slightly greater than that of the previous year. The area under rabi is also shown in the above table, although the water-rates for rabi will not be realized until 1899-1900. The total area under lease was not fully irrigated during the year. This was due to an abnormal flood in the Cossye on the 19th June 1898, which breached the Main Canal and also Nos. 1 and 4 distributaries, and thus rendered irrigation impossible for about two months. Fortunately the rainfall was seasonable, so the want of canal-water was not much felt, except on an area of about 6,000 acres on No. 1 distributary, for which a remission of a third of the water-rates was granted. As the flood-water did not subside quickly enough, a large area in the Panchkurah subdivision was thrown out of cultivation, which was afterwards cultivated with boro rice. In the Balichak subdivision a limited area could not be irrigated owing to obstructions caused by the new railway. These two areas amounting to 1,795 acres have been excluded from assessment as noted in the statement. A 10 per cent. deduction on account of increase in area by measurement was allowed, as in previous years, an area of 490 acres being thus excluded from lease in 160 villages, the leases of which were completed after measurement during the year. An area of 2,978 acres represents the net increase brought under lease after measurement of the villages, which were previously under provisbrought under lease after measurement of the villages, which were previously under provissional license."

LEASES.

44. The duty obtained from the discharge utilized is given below for the last three years :-

Dur	Y	OF
WA		

		Under Midnapore weir.	Under Panchkurah weir.	Tidal Reaches, Ranges I and II.	Total.
	1	. 2	3	4	5
1896-97	Kharif Acres Duty on gross supply Rabi Acres Duty on discharge utilized	56,334 232	7,763 228 	1,086	65,183
1897-98	Rabi Acres	173	7,472 146	732	72,206
1898-99	Kharif Acres Duty on gross supply Acres Duty on discharge utilized Duty on discharge utilized	62,950 434 	6,394 274 4,160 191	1,397	70,741 4,160

The duties on this canal are generally very large, but some of them are quite abnormal, and, indeed, only possible under most extraordinary circumstances. The matter will be enquired into and further details given in the

next report.

t report.

45. The total number of experiments made on land irrigated with canal CROP EXPERIwater was 26. The average outturn of the irrigated crop per acre was 17 maunds $27\frac{1}{2}$ seers of paddy and 36 maunds 3 seers of straw. The number of experiments made on unirrigated land was 26. The average outturn of the unirrigated crop per acre was 17 maunds $17\frac{2}{3}$ seers of paddy and 38 maunds and 9 seers of straw weighed dry. The Executive Engineer reports that in one experiment made by the Subdivisional Officer of Luchmapur, the paddy weighed wet 30 maunds 25 seers and straw 82 maunds 28 seers per acre.

In addition to the above, twelve experiments were made by the zilladars under the Special Deputy Collector Revenue Division. They gave an average

under the Special Deputy Collector, Revenue Division. They gave an average outturn of 17 maunds of paddy and 33 maunds of straw, weighed dry, per acre on irrigated land, against 16 maunds of paddy and 32 maunds of straw per

acre on unirrigated land.

The crop experiments on the Midnapore canal are not as fully reported

as they should be.

46. The balances, assessments, and recoveries of water-rates on the ASSESSMENTS, Midnapore Canal during the last five years are shown in the following state- COLLECTIONS, AND BALAN-

- P - 21	YEAR.	Amount outstanding at commencement of year.	Amount falling due during the year.	Total for recovery.	Cash realization.	Remitted or written off.	Balance at the end of the year.
7-75	1	2	3	4	5	6	7 7
1894-95 1895-96 1896-97 1898-99		Rs. 7,027 4,549 10,124 11,439 3,518	Rs. 1,35,016 1,04,111 1,05,660 1,13,079 1,12,341	Rs. 1,42,043 1,08,660 1,15,784 1,24,518 1,15,859	Rs. 1,36,882 98,059 1,00,618 1,19,909 1,07,554	Rs. 612 477 3,727 1,091 2,587	Rs. 4,549 10,124 11,439 3,518 5,718

There was a decrease of Rs. 738 in the assessments, and Rs. 12,355 in the collections during the year as compared with the corresponding figures of the previous year, and an increase of Rs. 1,496 in remissions granted. The outstanding balance at the end of the year showed also an increase of Rs. 2,200.

Regarding the increase and decrease the Superintending Engineer

writes :-

"Though the balance was a little larger than that of the preceding year, the collections to be satisfactory, considering the peculiar circumstances. Owing to damage must be taken to be satisfactory, considering the peculiar circumstances. Owing to damage caused to the canal by floods, the villagers at the beginning of the irrigation season could not get water. In October, when the crops were ripening, a plague of grasshoppers came and attacked the rice in No. 1 distributary and did considerable damage, so that the cultivators did not get a good outturn. As a rumour get about that remissions would be granted to did not get a good outturn. As a rumour got about that remissions would be granted to those villages in which the crop suffered, the villagers in the Antra subdivision declined to pay up their rates. Notices had therefore to be served in the villages explaining that if remissions were sanctioned by Government, the amount realized would be refunded, but meanwhile the assessment due must be paid in full. It was on this account that the balance of the real of the veer was greater than that of the realized would

at the end of the year was greater than that of the previous year."

"Out of Rs. 1,07,554 collected, Rs. 3,275 only were realised by certificate procedure. Twelve tahsildars had to realise a water-rate demand of Rs. 1,04,243 from 39,544 rate-payers in 933 villages within a period of three months. As a matter of fact, the greater part of the demand was realized in two months. The result cannot but be considered satisfactory, and reflects great credit on the Special Deputy Collector and his staff."

REMISSION.

47. The sum of Rs. 2,587 was remitted during the year 1898-99, against Rs. 1,091 in the previous year.

The following are the details:

Remission granted by Sunsi	-t 2: T			Rs.	A.	P.
Remission granted by Superin 28 of the Midnapore Car Remission granted by the Sp	nal Rules			103	8	3
rule 24, clause 1				144	4	6
Remission granted by the Sp rule 24, clause II	eciai Depu	ty Collector	under	2,141	6	3
On account of one-third ren	rinagi papatentag Nama	Total		2,389	3	0
Government letter No. 382	I, of 23rd	March 1899	engal	197	15	0
avies mit, symmetrie his a som	GRAND	TOTAL	•••	2,587	2	0

The remissions granted during the year were considerably more than in the previous year. They chiefly come under rule 24, II, for damage to crops on account of non-supply of canal-water owing to breaches caused by the flood already referred to. A large number of notices of remissions were issued during the year.

CERTIFICATES.

48. The extent to which recoveries by means of certificates were made during the year is shown in the following statement:-

Sparit Markey Spreading District	分	(Migratia	MIDNA	PORE.		
Particulars,	A Power	1897	-98.	1898-99.		
OTTO TO SWINGER WITH THE CONTROL OF		No.	Amount.	No.	Amount.	
1		2	3	4	5	
Cases for disposal. 1. Cases pending at the close of the preceding year	ed-	31 427	Rs. 200 3,740	6 347	Rs. 80 3,970	
Total Cases disposed of.		458	3,940	353	4,050	
demand having been remitted	the	10 442	62 3,798	4 345	28 3,926	
Total		452	3,860	349	3,954	
Balance outstanding at the close of the year	ar	6	80	4	96	

The number of certificate cases instituted during the year was 347, against 427 in the previous year, showing a satisfactory decrease of 80. The number of outstanding cases at the end of the year was 4 against 6 of the year before.

No judgment-debtor was arrested, nor was the immoveable property of any judgment-debtor sold during the year. In one case a warrant of arrest was reported to have been resisted. On enquiry, however, the evidence not being found satisfactory, no prosecution was instituted.

49. The number of complaints filed during the year, and the nature of COMPLAINTS.

their disposal, is shown in the following statement:-

	That France and	SERIES TO	RECEIVED	12.34	DISPOSED OF.			BALANCE PENDING AT END OF THE YEAR.			
Year,	Class of complaints,	Balance pending from pre- vious year,	Received	Total.	Allowed.	Refused.	Total.	Received during previous years.	Received during the year.	Total,	
1	2	3	4	5	6	7	8	9	10	11	
1897-98 {	Other compleme	81	261 59	342 60	122 30	169	291 54	l	100 L	51	
	Total .	. 82	320	402	152	193	345			6	
898-99 {	Ordinary remission Other complaints	17 0.00 to 100.7 (auto 10)	608 137	659 143	343 124	241	584 136			75	
	Total	57	745	802	467	253	720	-:		82	

It will be seen that out of a total number of 802 cases against 402 in 1897-98, 720 cases were disposed of by the Special Deputy Collector during the year, against 345 in the preceding year. The increase in the number of complaints was due to the large number of applications filed by the villagers for remission of water-rate owing either to non-supply of water or damage to crops by flood-water.

50. The cost of the revenue establishment during the last five years is shown below:-

REVENUE

ESTABLISHMENT UNDER THE COLLECTOR.	1894-95.	1895-96.	1896-97,	1897-98.	1898-99,
Andrew Street and Street Street Street	2	8	4		6
	Rs.	Rs.	Rs.	Rs.	Rs.
Permanent establishment, including travelling allowances.	18,436	17,530	18,650	19,654	20,799
Temporary establishment Contingencies Headman's fees	1,289 873 813	332 677 656	1,566 1,111	2,476 1,689	3,242 1,304
Total	21,411	19,195	21,327	23,819	25,345

In addition to the above, the following sums were paid by the Executive Engineer for water regulation:-

	Columbia		Water reg	ulation.
	els distribut		Permanent.	Temporary.
1894-95	1	# 17	1,187	Rs. 263
1895-96	1914 (191 4 - 1 717)		1,208	129
1896-97	•••	***	1,095	241
1897-98 1898-99	***	•••	1,219	138
1090.99	eles comments of	•••	1,633	

51. The navigation receipts were Rs. 1,03,681, against Rs. 1,32,235 in NAVIGATION. the previous years, showing a decrease of Rs. 28,554. The decrease was partly due to the plague, partly to depression in trade, but mainly to the opening of the Bengal-Nagpur Railway. The passenger traffic by the steamers has decreased by nearly 20 per cent. in two years; but there is not any marked decrease, as yet, in the passengers carried by native boats, owing, probably, to the fact that this traffic is mainly between Uluberia and Bansberia only, while the steamer passengers, who chiefly go to and from Calcutta, are more affected by the railway.

The Superintending Engineer writes:

"The tolls received from the Calcutta Steam Navigation Company are almost the same as last year. This is due to the fact that during the year the tollage for the daily double service in the canal was raised from two-fifths to half full tolls and for special trips from half to three-fifths full tolls. These rates will remain in force until the railway enters into direct competition with the canal. The causes which led to the decrease in the private tolls from Rs. 94,566 in 1897-98 to Rs. 66,336 in the year under review, will be explained in the

following paragraphs."

"There was a general falling-off both in the export and import trade, the total quantities of goods exported and imported during the year being 53,960 and 43,511 tons, against 86,265 and 45,234 tons, respectively, in 1897-98. The traffic in 1896-97 was the best on

record, but that was due to famine in other districts which increased the export trade, and the construction of the Bengal-Nagpur Railway gave a great impetus to the import traffic.

"The decrease in trade was due partly to the panic caused by the presence of plague in Calcutta, and also to the high flood in the river in June which did considerable damage to the canal banks. The low rates for produce in Calcutta were also not tavourable for exports.

"The portion of the canal from Midnapore to Panskura and the Narainghur Distributary was closed for silt clearance and repairs from the 20th March to the 20th April 1898 and

was closed for silt clearance and repairs from the 20th March to the 20th April 1898, and

again from 19th June to 8th July 1898.

"The traffic on the portion of the canal from Midnapore to Buramulla was stopped by the flood of 19th June 1898, which breached the canal banks in several places. Although traffic on the main canal was restored on the 8th July, it was not till the 21st of August 1898

traffic on the main canal was restored on the 8th July, it was not till the 21st of August 1898 that the Narainghur Distributary could be re-opened.

"Under 'Exports' decreases are noticeable principally in the case of 'rice' (11,600 tons), 'other food-grains' (15,000 tons), 'sugar' (850 tons), 'building materials' (3,600 tons) and 'miscellaneous goods' (1,500 tens). There was a slight increase in 'oil-seeds' (450 tons) and 'timber' (600 tons). Under 'Import' the principal items which contributed to the decrease were 'oils' (550 tons), 'salt' (850 tons), 'building materials' (900 tons), 'miscellaneous goods' (650 tons), and 'coal and coke' (2,600 tons), the only item which showed any important improvement being 'other food-grains' (4,800 tons). The increase in the import of "other food-grains" was wholly in paddy brought from Calcutta to the Ghatal subdivision of the Midnapore district and the neighbouring tracts, where the effect of the extraordinary high flood in June was most disastrous. The rise in the importation of of the extraordinary high flood in June was most disastrous. The rise in the importation of coal and coke, which began in 1895-96, and was very high in the following year, is gradually falling off as the railway works are approaching completion, and although it was reduced by about 2,600 tons this year, it is still above the normal by about 3,000 tons. The total value of imports and exports was respectively 61 lakhs of rupees and 50 lakhs against 66 and 82

The following statement shows the quantities and values of rice and paddy carried during the principal months of the year as compared with those of 1897-98:-

		180	98-99.		1897-98.				
MONTHS.	RICE.		PADDY.		Rice.		PADDY.		
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	
1	2	3	4	5	6	7	8 -	9	
September October November December January	1,234 1,810 910 969 1,145	Rs. 1,23,428 1,75,322 79,587 74,506 78,017	1,701 1,706 2,285 1,941 2,658	Rs. 84,427 77,263 99,116 61,683 91,848	3,504 2,307 2,201 3,002 1,795	Rs. 4,36,212 2,69,094 2,56,250 3,08,395 1,78,516	3,054 1,596 2,427 2,137 3,617	Rs. 2,04,110 94,703 1,22,037 95,190 1,57,156	
Total	6,068	5,30,860	10,291	4,14,337	12,809	14,48,467	12,831	6,73,196	

The table illustrates the decrease in trade in these items which are the ones which form the bulk of the traffic on the canal.

Particulars regarding the traffic on the canal for the last ten years are tabulated below:-

DESCRIPTION.	1889-90.	1890-91.	1891-92.	1892-93,	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
· 1	2		•	5	6	7	8	9	10	11
Miles open	72 1,16,409 2,196	72 89,556 1,689	72 (a)1,32,572 1,841		(a)1,14,994	72 (a)1,35,402 1,882	72 (a)1,43,918 1,999	72 (a)1,54,215 2,142	72 (a)1,32,235 1,837	(a)1,03,68
cluding empty boats No. Tonnage of boats Tons. Passengers carried No. Estimated value of cargo, including	52,060 462,418 176,226	45,054 417,803 187,700	42,32× 411.892 163,836	40,438 410,063 (b) 205,804	36,910 369,691 (b) 203,653	420,996	43,633 451,203 (b)227,905	507,959	43,608 454,977 (b)233,065	36,25 375,87 (b)218,18
	1,45,12,442	1,48,33,391	1,26,65,724	1,26,04,204	1,22,50,436	1,24,69,708	1,27,43,136	1,33,78,237	1,47,94,919	1,11,73,77

(a) Inclusive of tolls paid by the Calcutta Steam Navigation Company.
 (b) Inclusive of passengers carried by the Calcutta Steam Navigation Company's steamers.

TRAFFIC.

52. The miscellaneous receipts for the last five years were as follows:—

MISCELLA NEOUS RECRIPTS,

DETAILS.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99
1	2	3	4	5	6	7	8
AND THE COMMENT OF STREET	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sale of water Plantations Other canal produce Rent of buildings Fines	4 44 2 712	55 1 890	18 88 973	119 28 28 1,156	15 36 16 1,004	28 36 27 94	103
Miscella- neous. Rent of lands ,, of fisheries Cost of process Other items	12,468 1,479 2,173 7,437	12,049 1,507 722 7,081	10,390 1,440 833 8,775	14,953 1,664 672 6,304	19,891 1,434 582 514	13,950 1,505 896 6,023	7 19,258 1,299 509 341
Total	24,319	22,308	22,017	24,924	23,492	23,412	22,537

53. The expenditure on plantations during the year was Rs. 143 against Plantations. Rs. 111 of the previous year. The following table compares the condition of the plantations in 1898-99 with 1897-98:—

YEAR.	Trees upwards of 12 feet high.	Saplings between 4 and 12 feet.	Seedlings below 4 feet.	Total.
	2	3	4	5
1897-98 1898-99	No. 16,358 16,122	No. 4,789 4,824	No. 4,187 4,552	No. 25,334 25,498

54. The following table shows the highest levels of the Cossye and Rupnarain rivers, compared with those of last year, and with the highest recorded levels:—

FLOODS

River.	Locality.	1897-98,	1897-98,			HIGHEST RECORDED.		
-	The state of the s	Date.	Reading.	Date.	Reading.	Date.	Reading	
1	2	3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5	6	7	8	
	Midnapore above weir Ditto below weir Panchkurah above weir Ditto below weir Dainan Kantapukhur	16th August 1897 Ditto Ditto 16th July 1897 Ditto	80·00 32·20 32·10	19th June 1898 Ditto 16th September 1898 Ditto 1st September 1898	served.	19th June 1898 10th October 1876 Ditto 26th August 1885	93°30 Not ob- served.° 35°00 34°00	

^{*} Highest previous recorded flood at Midnapore 92'30 in 1868.

There were unprecedented floods in the rivers Cossye and Selye on the 19th of June 1898. The maximum height of the flood at Mohunpore was 93.30 and at the workshops 95.50 against 92.30 and 91.70, the previous highest

known readings. The flood caused an immense amount of damage to the canal works. The river Cossye broke through the dock embankment at Mohunpore, and, the flood water passing down the canal, caused breaches in both embankments of the first reach, and did very considerable damage to the distributaries, particularly to Nos. 1 and 4. At Latchmapore the right bank was breached just above the lock, for a length of about 200 feet, and the earth, behind the upper abutments, was scoured out to a depth of 30 feet. Two big breaches occurred in Reach II. One, just above Buramulla lock, was 250 feet in length. The head sluice of No. 28 distributary which was at the site of this breach was carried away completely. The spill on the left bank of the Cossye scoured the north abutment of the anicut to its foundations and severely damaged the apron near the same place.

The actual cost of maintenance and repairs during the last five years is shown below:-

	1893-94.	1894-95.	1895-98.	1896-97.	1897-98.	Average of previous five years.	1898-99	
1	2	3	4	5	6	7	8	
	Rs.	Rs.	Rs.	Rs.		Rs.	Rs.	
Head works, including buildings.	9,430	15,461	26,774	12,693	9,260	14,724	21,476	
Main canal and branches	67,404	68,702	77,291	65,331	74,899	70,725	94,310	
Distributaries	20,932	18,501	24,601	25,222	19,485	21,748	40,260	
Drainage and protective works.	2,058	1,240	3,261	1,898	2,171	2,126	4,684	
Working steam-launches and bholios.	3,354	598	3,120	3,011	2,882	2,593	2,976	
Total	1,03,178	1,04,502	1,35,047	1,08,155	1,08,697	1,11,916	1,63,706	

The outlay during the year was Rs. 55,009 more than that of the preced-The increase took place in all items of the charges. It was mainly due to the very heavy flood of June 1898, which did considerable damage to the canal works, banks and distributaries.

HEAD-WORKS.

56. The expenditure on head-works was Rs. 15,601 against Rs. 5,660 in the previous year, showing an increase of Rs. 9,941. On ordinary repairs Rs. 9,075 were expended, and on flood-damage repairs Rs. 6,526.

The expenditure on the Midnapore and Panchkurah head-works during the year was Rs. 15,601 and Rs. 5,875, respectively, against Rs. 5,660 and Rs. 3,600 in the previous year. On weirs the expenditure was at the rate of Rs. 2.91 per foot run at Midnapore, and Re. 1.7 at Panchkurah, as compared with Re. 0.92 and Re. 1.68, respectively, last year.

DISTRI-

57. The mileage rate for repairs to the main canal was Rs. 2,572, as compared with Rs. 1,858 in the previous year. This, again, was due to heavy

repairs made necessary by the flood.

The cost of working steam-launches and bholios used for inspection purposes was Rs. 2,976 against Rs. 2,882 in 1897-98. This expenditure was chiefly confined to working the steam-launch Kabaduck and Superintending Engineer's inspection launch Maud.

The expenditure on Tools and Plant was Rs. 23,776, as compared with Rs. 33,755 in the previous year. The outlay was mainly incurred on thorough

repairs to dredging plant at a cost of Rs. 19,499.
58. On distributaries, the expenditure on repairs was Rs. 40,260, or Rs. 142.26 per mile, against Rs. 19,485, or Rs. 68.85 per mile, in the previous

The damage caused to distributaries Nos. 1, 4 and 6 by the flood of June 1898 was excessive, the banks being levelled down in places and the beds filled up especially in the first reaches, where the flood-water was hemmed in between the canal and the railway embankment. No additions or alterations were made to any of the distributaries during the year.

The cost of maintenance per mile of both the main canal and the distributaries is given below for each of the last ten years:-

	i de la composición dela composición de la composición de la composición de la composición dela composición de la composición dela composición dela composición de la composición dela composición de la composición dela c	MAIN	CANAL AND WORKS, &C	Неар	DISTRIBUTARIES.				
YEA	R.	Length of canal open.	Total cost of work.	Rate per mile.	Length of distribu- tary channels.	Total cost of work.	Rate per mile.		
1		2	3	4		6	7		
		Miles.	Rs.	Rs.	Miles.	Rs.	Rs.		
1889-90 1890-91 1891-92 1892-93 1893-94 1894-95 1895-96 1896-97 1897-98 1898-99		48 48 48 48 48 48 48 48	93,738 93,187 1,30,897 74,818 82,246 86,001 1,10,446 82,933 89,212 1,23,446	1,953 1,941 2,727 1,558 1,713 1,792 2,301 1,728 1,858 2,572	283 283 283 283 283 283 283 283 283 283	19,769 11,851 10,365 12,612 20,931 18,501 24,601 25,222 19,485 40,260	69 41 36 44 74 65 87 89 69		

The rate of the distributaries is generally very high.

59. The following statement shows the quantity of work done by each DREDGING AND dredger and excavator, and the amount expended on their working during the SILT CLEARING.

		Quantity	Autura	Cos	T OF REMOV	ING.	Tittina		Total rate per 1,000 cubic feet.
NAMO	E OF DREDGER.	of earth dredged.	Actual cost of lifting.	Steam- hopper barges and S. L. Cricket.	Ordinary hopper barges.	Total.	Lifting rate per 1,000 cubic feet.	Removing rate per 1,000 cubic feet.	
	1	2	8	4	5	6	7	8	9
Hector Ajax Atlas Combination Cadmus		C. ft. 2,083,395 2,613,329 1,828,270 668,106	Rs. 10,848 6,224 4,870 320 3,151	Rs. 2,963 3,715 2,598	Rs	Rs. 13,811 9,939 7,468 320 3,151	5°20 2°38 2°66	1.42 1.42 1.42 1.42	6*62 3*80 4*08
		7,193,100	25,413	9,276		34,689	3:53	1.59	4'71
	Total for 1897-98	4,870,508	20,141	9,777	1000	29,918	4:13	2.00	6.13

The quantity of silt excavated during the year was considerably more than in the previous year, viz., 7,193,100 cubic feet, against 4,870,508 cubic feet in 1897-98. The cost of lifting and removing was Rs. 34,689, as compared with Rs. 29,918 in the year previous. The rate per 1,000 cubic feet was Rs. 4.82 against Rs. 6.13 in 1897-98: a decrease in rate usually attends an increase in case the part of the result is satisfactors. increase in quantity, but the result is satisfactory.

The total quantity of silt cleared by hand during the year was 1,761,998 cubic feet at a cost of Rs. 8,114, or Rs. 4-9-8 per 1,000 cubic feet against 1,151,404 cubic feet at Rs. 7,011, or Rs. 6-1-6 per 1,000 cubic feet in the preceding year. The reduction in cost of the removal of silt was due to the fact that level labour was available at a charge with a standard to the fact that local labour was available at a cheaper rate, as the men could not obtain further employment on the Bengal-Nagpur Railway in the Midnapore district.

60. The receipts from all sources show a decrease of Rs. 45,305, and the working expenses have exceeded those of last year by a sum of Rs. 33,748. The net revenue has decreased from that of last year by a sum of Rs. 79,053. The loss in revenue is mainly due to the depressed state of trade, and the increase in working expenses was caused by the heavy expenditure which had to be incurred in making good the damage done to the canal by the unprecedented flood of June 1898.

HIJILI TIDAL CANAL.

CAPITAL ACCOUNT.

61. The Capital, Interest and Revenue accounts of this canal are given below:-

1.—CAPITAL ACCOUNT.

HEAD OF ACCOUNT.	Outlay during 1898-99.	Outlay to end of 1898-99.
1	2	8
	Rs.	Rs.
Direct charges	Nil Nil	25,52,654 925
Net total direct charges	Nil	25 51,729
Indirect charges.		
Capitalization of abatement of land revenue Leave and pension allowances	Nil Nil	11,210 52,303
Total indirect charges	Nil	63,513

The remodelling works on the canal were completed in the year 1896.97. During the year no expenditure was incurred chargeable to capital account.

ACCOUNT.

2.—INTEREST ACCOUNT. Rs. Interest charges to end of 1897-98 21,39,517 Ditto for 1898-99 ... 1,02,069

Total ... 22,41,586

REVENUE

3-REVENUE ACCOUNT (Actuals).

	EXPEND	ITURE—	of the disconnection of	RECE	IPTS.
Particulars.	During 1897-98.	During 1898-99.	Particulars.	During 1897-98.	During 1898-99
1	2-	8	4	5	6
Direct Charges.	Rs.	Rs.	Total total	Rs.	Rs.
I.—Works, maintenance and repairs	33,759	43,792	Water-rates		•••
II Revenue manage- ment	3,910	3,763	Navigation	90,755	73,759
Total Direct Charges	87,669	47,555	Miscellaneous	1,455	1,527
Indirect Charges	1,719	2,474	Total	92,210	75,286
Total working expenses Net revenue	39,388 52,043	50,029 24,277	Less—Refunds of revenue	779	980
Total	91,431	74,306	Net total receipts	91,481	74,306

62. The following statement shows the receipts on revenue account and working expenses for the last ten years :-

PARTICULARS.	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1889-99,
1	2	3	4	5	6	7	8	9	10	11
RECEIPTS.	Rs.	Rs.	Rs.	Rs.						
Navigation Miscellaneous	40,338 1,614	27,145 899	36,348 567	52,180 1,282	58,209 987	57,089 1,436	60,677 1,299	89,511 1,435	90,755	73,759 1,527
Less-Refunds of revenue	41,952	28,044	36,915	53,462 72	59,196	58,525	61,976	90,946	92,210	75,286
Total Receipts	41,952	28,044	36,915	53,390	59,196	58,525	61,976	90,946	91,431	74,306
WORKING EXPENSES. DIRECT CHARGES. I.—Works, maintenance, and repairs.		W. H. S.					41	CV		
Works extensions and improvements Repairs Establishment, including	16,713	27,012	32,588	16,447	1,925 32,077	26,148	16,712 20,186	22,343	21,392	4,116 21,574
direction and accounts	4,157 1,806	8,636 13,487	11,483 1,693	5,562 5,363	12,614 3,901	9,770 5,417	13,966 3,996	8,159 4,000	8,367	13,912 4,190
Total	22,676	49,135	45,714	27,372	50,517	41,339	54,860	34,502	33,759	48,792
II.—Revenue management.							villa de la composición dela composición dela composición dela composición dela composición de la composición de la composición de la composición dela composición de la composición dela			
Navigation establishment	3,039	2,833	2,955	4,332	3,700	4,140	4,020	3,988	3,910	3,763
Total Direct Charges	25,715	51,968	48,669	31,704	54,217	45,479	58,880	38,490	37,669	47,555
NDIRECT CHARGES	1,007	1,606	2,014	1,385	2,284	1,947	2,518	1,701	1,719	2,474
otal working expenses	26,722	53,574	50,688	33,089	56,501	47,426	61,398	40,191	39,388	50,029
Net revenue	15,230	(-)25,530	()13,768	20,301	2,695	11,099	578	50,755	52,043	24,277

The working expenses were Rs. 50,029, as compared with Rs. 39,388, in 1897-98. On extensions and improvements, the following works were completed or in progress during the years :-

Two lock-bridges-one at Etamagra and the other at Terapakia, for which

an estimate amounting to Rs. 3,990 was sanctioned.

A new toll office at Gewankhali: this was sanctioned at a cost of Rs. 1,496, but the expenditure of the year was Rs. 611 only. The work could not be completed owing to the delay in the arrival of iron-work from

A weir in front of the Gewankhali supply sluice: this is to exclude the heavy silt-laden water from the supply channel when the sluice is working:

the expenditure on this work was Rs. 1,627.

The canal was maintained in an efficient condition throughout the year. The total cost of maintenance, and repairs (exclusive of extensions and improvements, but inclusive of establishment and tools and plant and indirect charges), was Rs. 45,913, as compared with Rs. 39,388 in the previous year. There were no special repairs done to the canal. The whole length was open to traffic throughout the year, with the exception of a short length (about 6,670 feet), which was cross-bunded for silt clearance by hand labour. This, however, did not cause any interruption to traffic, as the supply channel at Gewankhali was used for navigation purposes. About one third of the work was completed during the year under report. The remaining portion will be cleared during 1899-1900.

63. The length of the Canal, Ranges I and II, remains the same as last Lengths of year, viz., 29 miles from the junction of the lock channel and the Hooghly Canal, Supply river at Gewankhali to Kalinagar on the Rassalpur river, of which 12½ miles Pass Keal. are in the former range, including the Haldi river crossing, and 16¾ miles in the latter. The supply channel at Gewankhali will probably have to be eventually extended still further, as a considerable quantity of silt is carried beyond the supply channel into the canal the supply channel into the canal.

64. The rainfall registered at Contai was 55.62 inches against 61.38 RAINFALL inches in the previous year. It was below the average in May and June, up to the average in July, August and September, and in October it was heavier than usual. At Etamagra the rainfall was 55.47 inches against 45.55 inches in the previous year.

65. The traffic statistics of the canal for the last ten years are given below :-

PARTICULARS.	1889-90.	1890-91.	1891-92.	1892-93,	1893-94.	1894-95.	1895-96.	1896-87.	1897-98.	1898-99
1	2	3	4	5	6	7	8	9	10	11
Miles open No.	29	29	29	29	29	29	29	29	29	20
Toll collections Rs.	(a)40,341	(a)27,145	(a) 36,348	(a)52,180	(a) 58,209	(a)57,089	(a)60,677	(a)89,511	(a)90,755	(a)73,759
Rate of toll per mile ,,	1,200	821	1,128	1,607	2,007	1,968	2,092	3,086	3,219	2,543
Number of boats, in- cluding empty boats No.	13,785	10,215	15,332	16,084	14,716	15,133	15,692	22,979	21,438	17,694
Tonnage of boats Tons	124,605	91,114	133,575	168,239	1,78,649	193,345	208,574	290,595	282,272	229,306
Passengers carried No.	(8)30,222	(6)22,420	(5)27,320	(5)42,488	60,081	(b)34,951	(b)27,581	(b)28,075	(8)26,026	(8)28,431
Estimated value of cargo, including rafts Rs.	27,29,720	20,78,972	34,97,725	52,56,550	42,37,488	44,85,289	48,84,232	69,55,120	77,39,218	53,13,290

(a) Inclusive of tolls, paid by the Calcutta Steam Navigation Company.
 (b) Inclusive of passengers carried by the Company's steamers.

The tollage receipts were Rs. 73,759 against Rs. 90,755 in the previous year, showing a decrease of Rs. 16,996.

The Superintending Engineer writes:—

"The number of boats that took tickets was 17,694, as compared with 21,438 of 1897-98, and the gross tonnage was 2,29,306 against 2,82,272 in the preceding year. It will be seen from the above that the tonnage and number of boats passing and the tollage receipts were less than in the previous year. The falling-off in tollage was chiefly owing to diminished export trade in rice, paddy and straw due partly to the plague scare and also to the low prices which prevailed in the Calcutta market.

"The receipts from steamer companies were Rs. 6,729 against Rs. 5,787 in the previous year, of which the Calcutta Steam Navigation Company paid Rs. 6,337. The number of passengers carried was 22,422 against 19,924 in the previous year. The India General Steam Navigation Company paid Rs. 392 as tollage on steamers and barges going to Calcutta for repairs and returning therefrom. A few goods and passengers were also taken by them for which they paid Rs. 78 as tollage.

"The exports of rice and paddy were less during the year, but there was an increase in the export of jute bides and skips

export of jute, hides and skins.

"Altogether 52,020 tons of rice passed through the canal against 68,911 tons in the preceding year. Its distribution by ranges is given below:—

real constitution and an arrangement of	1898-99.	1897-98.
1270, 1 2000, 300, 17 100, 17 1, 100	2	8
ni 1821 - Andrew Jagon Granders	Tons.	Tons.
Range I	21,793	30,239
ange II	13,777	16,286
Both Ranges I and II	16,450	22,286
Total	52,020	68,911

"The import trade on the Hijili Tidal Canal showed a decrease in rice, miscellaneous

"The import trade on the Hijli Tidal Canal showed a decrease in rice, miscellaneous goods, metal, salt, tobacco, coal, coke and mustard, as compared with the previous year, while there were increases in sugar, other food-grains, kerosine oil and building materials.

"The issue of through tickets from Kalinagar to Gewankhali and vice versa was sanctioned by Government from 1st February 1899. The effect of this concession in rates in drawing traffic from the Rassalpur and Haldi rivers will be reported on next year."

MISCELLA-The miscellaneous receipts for the last five years are shown below:-1893-94. 1894-95. 1895-96. 1896-97. 1897-98. Average of pre- 1898-99. vious five years. Rs. Rs. Rs Rs. Rs. Rs. 1,436 1,299 1,322 1,435 1,455 1,527

SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899. 2079

67. The following table shows the state of the plantations for the last PLANTATIONS. two years :-

YEAR,	Trees upwards of 12 feet in height.	Saplings from 4 to 12 feet in height.	Seedlings under 4 feet.	Total.
1 1 1 1	2	8	4	5
1907 00	No.	No.	No.	No.
189 7 -98	6,683 7,714	5,789 5,121	436 5,276	12,908 18,111

The receipts during the year were Rs. 22 against Rs. 14 in the previous year, and the expenditure was Rs. 57 against Rs. 42. The increase in the number of trees was due to a more correct count having been taken by the Executive Engineer.

68. There were no high floods in 1898-99 in any of the rivers crossed by the canal, and no breaches occurred. The following statement shows the highest-flood levels recorded at the locks of the rivers Hooghly, Haldi and Rassalpur during the year compared with the previous year and the highest known floods.

net Military (1985) (1985) (1986) (1986) and 1987) (1986) (1986) (1986) (1986) (1986)	1897-98.			1898-99.	Highest known flood.		
1 19 19 19	2	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	4	5	6	7	
Hooghly river at Gewankhali lock	115.30	On 13th August 1897	115:50	On 3rd August 1898	123.23	Cyclonic storm, 1874	
Haldi river at Etamagra lock	115.20	Ditto	115.90	On 1st September	120°23(a)	Albania de la Carta	
Rasaslpur river at Kalinagar lock	114 10	On 14th August 1897	114-20	1898. On 4th August 1898	118*50	26th August 1888.	

(a) Mr. Vertannes' record without date.

Note.—Etamagra readings have been given instead of those at Terapakia. Mr. Vertannes' record refers to Etamagra, and it jevel at False Point.

Datum is 103'97 below mean sea-

The highest canal level in Range I at Etamagra was 112.50 on 15th September 1898, and in Range II at Kalinagar it was 112.20 on 13th March 1899 against 112.80 on 25th November and 111.80 on 15th August 1897,

respectively.

69. The quantity of silt dredged from Ranges I and II of the canal, and DREDGING AND SILT CLEARING. the cost of lifting and removal are shown in the statement below:-

NAME OF DREDGER.		Cubic feet dredged.	Cost of lifting 1,000 c.ft.	Cost of removing 1,000 c.ft.	Total cost of 1,000 c.ft.	Site of work.			
16. 71.		2	8	4	5	6			
Marchant No. I	100 100 100 100 100 100 100 100 100 100	297,750	4:31	5.00	9:81	Range I, Gewankhali supply channel. Bund between supply channel and main canal at Gewan-			
Bruce No. II (new)		17,500 549,000	12·74 3·51	5·03 5·00	17·77 8·51	khali and Gewankhali lock chamber. Range II at Terapakia. Range I and Gewankhali			
Ditto	•••	40,000	3.51	5.00	8.51	supply channel. Range II at Terapakia.			
Total		904,250	3 95	5.00	8.95	MARINE CALLED AND STORY OF THE			

No dredging was done in the Sadar khal, which was in a much better

state during the year.

The dredgers were kept at work in Ranges I and II, 846,750 c.ft. and 57,500 c. ft. of silt, respectively, being removed at a total cost of Rs. 8,100, as compared with 53,400 c. ft. and 77,500 c. ft. removed from these two ranges during the previous year at a cost of Rs. 5,613. The cost of maintenance per mile of the year was Rs. 1,617, as compared with Rs. 1,385 per mile in the preceding year.

In Range I of the canal the only silt clearance done by hand labour was near Gewankhali. Out of the total length of 6,670 feet to be silt-cleared, about one-third of the work was done during the year. The amount of silt removed was 111,560 c. ft., at a cost of Rs. 798, or an average rate of Rs. 7·15 per 1,000 c. ft., against Rs. 5 per 1,000 allowed last year. Owing to great demand for labour in the neighbourhood, this higher rate was unavoidable.

GENERAL RESULTS.

demand for labour in the neighbourhood, this higher rate was unavoidable.

70. The results of the year are disappointing. There is an increase in expenses and decrease of revenue; the latter, however, is probably only due to the depression in trade and is one of the fluctuations which must be expected.

SONE CANALS.

CAPITAL ACCOUNT.

71. The Capital, Interest and Revenue Accounts of these canals are given below:—

I.—CAPITAL ACCOUNT.

Heads	OF ACCOUNT.		Outlay during 1898-99.	Outlay to end of 1898-99.	
	1		2	3	
Direc	r Charges.	•	Rs.	Rs.	
I.—Works II.—Establishment III.—Tools and plant IV.—Suspense accounts Loss by exchange		::	12,522 2,809 (—) 43,788 13	1,88,07,937 52,16,639 21,83,814 22 52,240	
V.—Less—Receipts on C	Total apital account		(—) 28,444 3,000	2,62.60,152 4,17,150	
전 하는 동안 전 사람들 선생님은 소리를 <mark>했다.</mark> [편집]	total Direct charges	•••	() 31,444	2,58,43,002	
And Real Capitalization of abatement Leave and pension allowan			393	37,911 8,79,585	
Tot	al Indirect charges		393	9,17,496	

The construction estimate of these canals is closed. During the year the original works sanctioned and carried out, chargeable to the open capital account under 43—Minor works and Navigation, were an escape channel from the Kathrain distributary, Gurra Chowbey Branch Canal, and some permanent outlets on distributaries for long leased areas. The total expenditure incurred on their construction and in completing some of the permanent outlets and regulators, and the syphon and sub-distributary from the Behea Branch Canal, which were in progress in the previous year, was Rs. 12,522 Other original works for extensions and improvements, the estimated cost of each of which, for works alone, amounted to Rs. 1,000 or under, were charged to the revenue account, in accordance with the rules laid down in paragraph 36, Chapter V, Volume II of the Public Works Department Code.

ACCOUNT.

II.-INTEREST ACCOUNT.

			Rs.
Interest charges to end of 1897-98		•••	2,28,09,309
Ditto for 1898-99	• • • • • • • • • • • • • • • • • • • •		10,34,349
the property of the second	Total	•••	2,38,43,658

III.—REVENUE ACCOUNT (ACTUALS).

REVENUE ACCOUNT.

PARTICULARS.	EXPEN	DITURE-			RECEIPTS.		
a nitra survey La	During 1897-98. During 1898-99.		PARTICULARS.		During 1897-98,	During 1898-99	
1 1	2	8	4		5	6 Rs.	
DIRECT CHARGES. I.—Works, mainte-	Rs.	Rs.			Rs.		
nance and repairs	3,82,755	3,87,525	Water-rates	•••	11,42,244	9,29,016	
agement	1,79,840	1,68,102	Navigation	•••	88,426	1,05,564	
Total Direct charges Indirect Charges	5,62,595 55,547	5,55,627	Miscellaneous	•••	36,304	40,685	
Total Working Ex-	00,041	52,618	Total Less—Refunds	of	12,66,974	10,75,265	
penses Net revenue, profit	6,18,142 6,36,648	6,08,245 4,63,167	Revenue		12,184	3,853	
Total	12,54,790	10,71,412	Total receipts		12,54,790	10,71,412	

72. The following statement compares the "Earnings" with the actual outlay for the years 1897-98 and 1898-99:—

EARNINGS.

Earnings— Irrigation Navigation Miscellaneous				1897-98. Rs. 9,26,830 87,429 36,304	1898-99. Rs. 9,38,607 1,05,087 40,685
Deduct re	funds of	Total revenue	···	10,50,563 12,184	10,84,379 3,853
Net earnings Outlay	:::	•••	:::	10,38,379 6,18,142	10,80,526 6,08,245
The following		ed profit		4,20,237	4,72,281

73. The following is a statement of the revenue account and working expenses of the canal for ten years:—

FINANCIAL RESULTS.

THOSE STATES	1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95,	1895-96.	1896-97.	1897-98.	1000 0
33 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	8	4	.5	6	7	8	9		1898-99
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.				10	11
Water-rates Navigation Miscellaneous Total	8,16,394 57,759 23,342	6,44,718 65,629 26,128	8,11,750 66,517 31,827	9,68,070 59,089 29,214	8,42,309 60,025 29,578	Rs. 7,43,243 58,898 35,620	Rs. 6,77,714 61,261 33,148	Rs. 9,57,726 70,006	Rs. 11,42,244 88,426	Rs. 9,29,010
Less-Refunds of revenue	8,97,495 16,520	7,36,475 7,305	9,10,094 4,020	10,56,373	9,31,912 6,237	8,37,761	7,72,123	10,64,693	36,304	40,680
Total Receipts	8,80,975	7,29,170	9,06,074	10,52,581	-	2,927	6,807	8,048	12,66,974 12,184	10,75,265
WORKING EXPEN- SES.	100.00	111	CHE LOS MAN	10,02,081	9,25,675	8,34,834	7,65,316	10,59,645	12,54,790	10,71,412
DIRECT CHARGES. L-Works, maintenance and repairs.		•				er des	- 710 - 70			
Works (extensions and improvements) Repairs, including com- pensation Establishment, including direction and including	4,712 2,92,992	3,263 2,72,831	3,812 2,59,832	6,541	7,419	10,972	20,428	25,029	12,365	8,230
direction and accounts	1,82,667 33,460	1,88,895 28,527	1,89,196	2,80,579	2,65,928	2,20,227	1,32,057	1,51,717	1,40,015	1,57,194
Total	5,13,831	4,93,516	28,843	28,031	27,206	27,543	2,00,094 15,351	1,83,041	2,16,927	2,07,788
IIRevenue manage-	Live	4,00,010	4,81,683	5,23,961	5,22,766	4,90,471	3,67,930	3,83,187	3,82,755	3,87,525
rigation establishment Navigation ditto	1,52,823 14,305	1,45,528 14,242	1,52,113 14,264	1,59,300 14,430	1,49,732 14,391	1,46,960	1,42,311	1,50,530		Section 1
Total	1,67,128	1,59,770	1,66,377	1,73,730	7	14,291	14,260	14,954	1,62,858	1,52,692
otal Direct charges	6,80,959	6,53,286	6,48,060	6,97,691	6,86,889	1,61,251	1,56,571	1,65,484	1,79,840	1,68,102
	5705 A			-100,002	0,00,089	6,51,722	5,24,501	5,48,671	5,62,595	5,55,627
ment of land revenue eave and pension allow- ances	48,971	48,813	49,780	53,556	54,087	55,017				•
otal working expenses	48,971	48,813	49,780	53,556	54,087	_	49,933	48,793	55,547	52,618
Not	7,29,930	7,02,099	6,97,840	7,51,247	7,40,976	55,017	49,933	48,793	55,547	52,618
Net revenue	1,51,045	27,071	2,08,234	3,01,334		7,06,739	5,74,434	5,97,464	6,18,142	6,08,245
STATE OF THE PARTY		THE RESERVED			1,84,699	1,28,095	1,90,882	4,62,181	6,36,648	4,63,167

The water-rate receipts during the year were Rs. 2,13,228 less than in the previous year, 1897-98. This is due to the fact that the former year was an exceptional one, mainly owing to the fact that the water-rates on the large area of rabi irrigated in the famine year 1896-97 were collected in 1897-98. They were, however, more than the average of the last five years by Rs. 56,369. The navigation receipts for the year showed an increase of Rs. 17,138 over those of the preceding year, and were the largest on record since the opening of the canals for traffic. This increase is not likely to be maintained as it is largely due to the construction of the Mogulsarai-Gva Railway.

largely due to the construction of the Mogulsarai-Gya Railway.

Under "Working expenses" the works carried out were—the construction of regulators in distributaries, permanent outlets, culverts under roads in connection with village channels, tahsil sheds, remodelling of roofs of lock khalasis' sheds with Allahabad tiles, and minor improvements to drainage. The cost of maintenance and repairs exceeded that of the previous year by Rs. 17,179. The increase was owing to the removal of silt above and below the locks and at the bifurcation by hand, and more extensive repairs to the masonry works.

The Eastern Main series of canals was closed from 26th April to the 5th June 1898, and the Western Main series from 26th March to 9th April 1898.

LENGTHS OF CANALS AND DISTRIBUTA-RIES. 74. The following table shows the length of canals and distributaries in operation and the areas commanded, provided with distributaries, and irrigated at the close of each of the last two years, respectively:—

					1897-98.								1898-99	9.	
NAME OF CANAL.	Navigable canals.	Canals for irrigation only.	Distributaries.	Area protected from flood.	Area under command.	Area provided with distribu- taries.	Area irrigated.	Percentage of area irrigated to area provided with distrib- utaries.	Navigable canals.	Canals for irrigation only.	Distributaries.	Area protected from flood.	Area under command.	Area provided with distrib- utaries,	Area irrigated.
1	2	8	4	5	6	7	8	9	10	11	12	13	14	15	16
Eastern Sone { Eastern Main Division. { Patna	Miles. 71/2 79	Miles,	Miles. 9 341}	Acres.	Acres. 15,462 390,693	Acres. 15,462 379,737	Acres. 2,578 86,928	17 23	Miles. 7½ 79	Miles.	Miles, 9 341½	Acres.	Acres. 15,462 390,693	Acres. 15,462 379,737	Acres. 2,777
	861		3501		406,155	395,199	89,500	23	861		3501		406,155	395,199	90,47
Arrah Divi- Dumraon Branch Behea Branch	651	 40½ 31	208 149 113		229,433 209,817 179,104	229,433 209,817 179,104	75,646 67,123 60,308	33 32 34 *	65}	 40‡ 31	208 149 115		229,433 209,817 179,104	229,433 209,817 179,104	73,885 67,726 60,151
	651	711	470		618,354	618,354	203,077	33	651	711	472		618,354	618,354	2,01,76
Ditto Dehri Workshops sub- division, Western Main.	9	٠						***	9				7 		
Western Main Gurra Chowbey Branch	121	38	46} 55}		89,480 173,440	89,480 114,522	} 31,319	15	{12½ 	38	461 551	-	\$9,480 173,440	89,480 114,522	} 33,563
sion. Buxar	451	394	196 111‡		233,600 212,480	203,580 134,514	}109,543	32	{451 	391	196 111‡		233,600 212,480	203,580 134,514	}114,995
	574	77%	409		709,000	542,096	140,862	26	574	77%	409		709,000	542,096	148,558
TOTAL SONE CANALS	2181	1483	1,2291		1,733,509	1,555,649	433,445	28	2181	148‡	1,2311		1,733,509	1,555,649	440,790

The length of the main canals is the same as last year, while there is an increase of 2 miles in distributaries. This increase is due to the construction of the Pitumpur sub-distributary of the Behea Branch Canal in the Arrah Division. There are no changes in the areas commanded and provided with distributaries.

75. The lengths of village channels and the number of outlets in use during the year were as follows:-

DIVISION.

1

Total, 1898-99

Total, 1897-98

Eastern Sone

Arrah

Buxar

Total length of village channels completed up to end of 1898-99.	Total number of temporary and permanent outlets in use during 1898-99.	Number of permanent outlets,	Number of temporary outlets.	
2	3	4	5	
M. Ft.	No.	No.	No.	

1.065

1,915

3,652

3,634

672

595

580

920

2,095

2,386

1,660

2,495

1,592

5,747

6,020

During the year the permanent outlets increased from 3,634 to 3,652, and the temporary outlets decreased from 2,386 to 2,095. A total number of 29 permanent outlets was constructed in the Eastern Sone Division, and 17 in the Buxar Division. Many more outlets have been sanctioned for the Buxar Division, the construction of which is in progress. The progress made in the construction of these outlets is not as good as it should be.

529

1,345

1,106

2,981

2,616

3,804

2,890

1,587

3,001

414

As regards village channels made by the villagers themselves, there has been an increase of about 358 miles in length, which may be considered very satisfactory. Progress is also being made in improving the channels, but the Superintending Engineer reports that in order to effect this it has been necessary to bring pressure on the owners by refraining to renew their leases until the improvements are carried out. This is quite right, and the Chief Engineer trusts that the local officers will firmly insist on the improvement of channel

as it is by that means that the irrigation is rendered more efficient.
76. The following is a statement of rainfall in the vicinity of the Sone Canals for the last five years :-

RAINFALL.

	ALPAN A		AVERAG	JE OF 22 S	TATIONS.	
		1894-95.	1895-96.	1896-97.	1897-98.	1898-99
- A	1	2	8	4	5	6
Kharif seasc	on { August September October	Inches. 14.81 9.50 8.06	Inches. 10.41 5.90 0.33	Inches. 9.69 2.81	Inches. 12·32 5·40 5·18	Inches. 18:32 13:14 1:05
	Total	32.37	16.64	12.50	22.90	32.51
Rabi season	November December January February	2·08 0·03 0·56 0·61	0·14 0·01 	0·73 0·31 0·03 1·08	1.39	0.06 1.64 0.23
	Total	3.28	0.15	2.12	1.39	1:93
	Whole year	58.22	36.26	32.05	52.98	54.91

The rainfall of the year was somewhat in excess of the previous one. In the kharif season the excess was considerable. It was, however, not nearly so favourably distributed. There was no large fall in June, so useful for ploughing and early sowing, whilst there was a heavy fall, to which the excess in the *kharif* season is chiefly due, in September during the "Utra Naichhatra," the period of *nigar* or draining of the rice-fields; this was of little advantage to the crops. The "Hathia" rain, on which the maturing of the rice crop is so largely dependent, entirely failed, and the rain held off till nearly the middle of October; the falls, moreover, after the middle of October, were generally light in the imported treate and there was in consequence a heavy demand ally light in the irrigated tracts, and there was, in consequence, a heavy demand for canal-water from the 5th of October. The rabi rainfall was a normal one and more favourable for the crops than that of the previous year.

The following table shows the rainfall during the "Hathia Naichhatra" and for the succeeding ten days since 1888; it is based on the 22 stations mentioned in subsidiary Form IVE(a):—

2084

			Average	Average		IN THE SHAHABAD DISTRICT ONLY.		
	YEAR.		during the "Hathia," 25th September to 8th or 9th of October.	rainfall during ten days after the "Hathia."	Period of maximum demand for water in any period of ten days.	Average daily discharge during that period per 100 acres leased.		
Carrier Street	1	/ 1633	2	3	4			
	To a pulson to the		Inches.	Inches.	October.	C. ft.		
1888	1000	1	0.18	Nil	12th to 21st	2.00		
1889			0.02	0.11	6th to 15th	1.92		
1890		***	4.15	0.86	10th to 19th	1.48		
1891		***	1.45	Nil	14th to 23rd	2.04		
1892			0.86	Nil	10th to 19th	1.90		
1893	0.000.000	***	3.13	4.39	8th to 17th	1.58		
1894			3.97	2.67	15th to 24th	1:31		
1895	***		0.90	Nil	7th to 16th	2.13		
1896	•••	•••	Nil	Nil	6th to 15th	1.85		
1897	•••		2.42	1.86	25th Sept. to	1.75		
1898	•••		0.01	1.03	4th October 5th to 14th October.	1.81		

77. The irrigation for ten years, together with the rainfall over 16 IRRIGATION. stations actually situated on the canal-irrigated area, is show below :-

YEA	R.	Kharif.	Rabi.	Perennial.	Total.	Rainfall
1		8	8	4	5	6
	A mid	Acres.	A cres.	Acres.	Acres.	Acres.
1889-90		230,741	55,613	18,928	305,282	49.65
1890-91 1891-92		211,726 248,819	51,318 210,907	17,970 14,997	281,014 474,723	\$52.28 26.82
1892-93		274,839	126,195	9,727*	410,761	37.69
1893-94		280,528	66,458	19,790*	366,776	46.62
189 ±-95		258,361	41,664	17,109*	317,134	59.65
1895-96		261,485	115,343	18,394*	395,222	38.36
1896-97		316,941	215,390	22,825*	555,156	30.59
1897-98		299,061	103,371	31,013*	433,445	53.59
1898-99		304,778	110,035	25,983*	440,796	55.74

^{*} Hot-weather crop.

The figures in columns 4 and 5 above and below the black line are not strictly comparable owing to different system of dealing with the hot-weather irrigation.

78. The following statement gives the areas of each crop irrigated under season and long term (seven and three-year) leases from 1893-94 to 1898-99 under the new rules:—

IRRIGATION UNDER LEASES.

Crops.	Allow the special production of the special	1893-94.	1894-95.	1895-96	1896-97	. 1897-98.	Average of previous five years.	1898-99.
1	2	3	4	5	6	7	8	9
		Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Kharif {	Long-term leases.	254,515	233,756	227,761	244,122	269,234	245,877	278,760
	Season leases	26,013	24,605	33,724	72,819	29,827	37,398	26,018
		280,528	258,361	261,485	316,941	299,061	283,275	304,778
Rabi {	Long-term leases.	37,231	30,234	31,157	30,709	34,239	32,714	35,567
(Season leases	29,227	11,430	84,186	184,681	69,132	75,731	74,468
		66,458	41,664	115,343	215,390	103,371	108,445	110,035
Hot-weather	Season leases	19,790	17,109	18,394	22,825	31,013	21,826	25,983
Total	1	366,776	317,134	395,222	555,156	433,445		440,796
	Total long- term leases.	291,746	263,990	258,918	274,831			314,327
	Total season leases.	75,030	53,144	136,304	280,325			126,469

Under the new rules for the Sone Canals there are no separate leases for sugarcane: they are included in each season lease.

The total areas irrigated under each form of lease are abstracted as follows for convenient reference:—

	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99.
.1	2	3	4	5	6	7	8
	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.	Acres.
Area irrigated under long-term leases.	291,746	263,990	258,918	274,831	303,473	278,591	314,327
Area irrigated under season leases.		51,913	120,392	259,323	127,190	126,622	119,337
Area irrigated by sale by volume " " without permit	67 681	55 1,176	13,856 2,056	18,100 2,902	1,077 1,705	6,629 1,704	3,777 3,355
Total	366,776	317,134	395,222	555,156	433,445	413,546	440,796

During the year there was an increase of 10,854 acres in the areas irrigated under long-term leases. The area of rabi crops irrigated varies greatly with the season; when there is good rainfall in October the rabi area is always small. The rabi crop is mainly irrigated under season leases, only a small portion of the area falls within the long-term leases.

Owing to the failure of rain during the hathia there was a very heavy demand for canal-water from the 5th of October. This excessive demand was met in a satisfactory manner.

The hot-weather irrigation decreased from 31,013 acres in 1897-98 to 25,983 acres, but though less than last year, it was still above the average of previous years. There is only a small volume of water available for this kind of irrigation, and the area can not be very largely increased.

As sugarcane is the only crop for which canal water is taken during the hot weather, the irrigation during that season may be accepted with accuracy as the area of sugarcane irrigated as one crop. The areas irrigated in the several divisions are given below:-

Eastern Sone		 	•••	Acres. 3,462
Arrah	Sign Longraph And Sign	 Some Children Con.	the break based	16,483
Buxar	•••	 •••		6,038
			Total	25,983

The areas irrigated in 1898-99 in each division and subdivision are DISTRIBUTION shown below:-

Transfer Transfer			Acres.	Acres.	
Eastern Sone Division— Daudnagar subdivision			45,492		
Bikram ditto	•••	•••			
maram ditto	•••		44,986		
Arrah Division—				90,478	
Nasriganj subdivision			39,222		
Koath ditto			67,724		
Ramnagar ditto			60,151		
Agiaon ditto	• ***		34,633		
			-00	201,760	
Buxar Division—				201,100	
Sikroul subdivision		1.01.3	80,289		
Jamrore ditto			47,216		
Basawan ditto			21,053		
	•••		21,000	148,558	
				110,000	
	Total			440,796	
	7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7. 7			110,100	

LEASES.

Particulars of the long-term leases are given in the following statement:-

	Leases which laps-	LEASES IN F APRIL	ORCE ON 1ST 1898.	Seven-year	Total area under long- term leases in 1898-99.	
Division.	ed on 31st March 1898.	Seven-year leases.	Three-year leases.	leases entered into during 1898-99.		
1	2	3	4	5	6	
Eastern Sone Arrah Buxar	Acres. 178 33	Acres. 67,782 138,450 80,730	Acres 644	Acres. 3,859 1,003 5,740	Acres. 71,641 140,097 86,470	
Total	211	286,962	644	10,602	298,208	

The leases which lapsed on the 31st March 1898 were all three-year leases: the 644 acres of three-year leases which remained in force on the 1st April 1898 have lapsed on the 31st March 1899. So three-year leases are now extinct. No seven-year leases lapsed on the 31st March 1898, and consequently none were renewed, the 10,602 acres leased during the year are for new blocks.

79. The assessments for the unauthorized use of water and for wastage

UNAUTHO-RIZED IRRIGA-TION.

were greater than those of the previous year. The figures are:

	1893-94.	1894-95.	1895-96.	1896-97.	1897-93.	Average of previous five years.	1898-99
1	2	8	4	5	6	7	8
ng ngalik ti sambi tugan dalah kulanggan Kalangan	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Unauthorized use of water.	4,760	6,910	8,568	13,253	9,576	8,613	23,309
Wastage of water	615	682	1,103	2,460	1,196	1,211	3,529

80. The assessments for water sold by "volume" amounted to Rs. 6,044, against Rs. 1,762 in the previous year.

The approximate area irrigated is given below :-

Di	Vision.	8 2010	Approximate area, 1897-98.	Approximate area, 1898-99.
514 2 ST	1		2	3
			Acres.	Acres.
Eastern Sone Arrah Buxar	**** ****		184 893	2,842 518
	Total		1,077	3,777

This increase of 2,700 acres during the year is due to the smaller rainfall in the Hathia.

81. The following statement shows the areas of the several crops actually irrigated in each Division since the year 1892-93, when the new rules came into force:—

IRRIGATION IN EACH DIVISION.

SALE BY

	EA	STERN	SONE I	Division	v.		ARRAH .	Division	x.	1		Box	AR DIVI	sion.		To	TAL FOI	ALL D	VISIONS	- 16
AR.	leases.	SEA	son L	EASES.		leases.	SEA	SON LEA	SES.		eases.	SEA	SON LEA	SES.		leases.	SEA	SON LE	ASES.	<u> </u>
	Long-term	Kharif.	Rabi.	Hot-wea-	Total.	Long-term le	Kharif.	Rabi.	Hot-wea-	Total,	Long-term l	Kharif.	Rabi,	Hot-wea-	Total.	Long-term le	Kharif.	Rabi.	Hof-wea-	Total.
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.
16	64,801 67,894	7,873 9,123	6,987 4,880		79,661	124,814	14,835	35,996	4,664	180,309	82,351	16,494	46,883	5,063	150,791	271,966	39,202	89,866	9,727	410,76
95	68,657	7,359	2,372	2,531	84,428	133,894	7,987	18,064	14,219	174,164	89,958	8,903	6,283	3,040	108,184	291,746	26,013	29,227	19,790	366,77
16	71,273	5,710	6,033	3,610	87,626	127,738	10,313	8,318 32,336	13,058	158,444	66,025 59,907	9,486	740	1,582	77,833	263,990	24,605	11,430	17,109	317,13
n		23,831		2,193	108,438	142,155	17,384	58,553	15,936	234,028	69,556	31,604	45,817 106,834	1,697 4,696	124,122 212,690	258,918 274,831	33,724 72,819	84,186 184,681	18,394	395,22 555,156
18	70,823	1 1 1	7,503	3,808	89,506	148,515	3,636	32,262	18,664	203,077	84,135	18,819	29,367	8,541		303,473	29,827	69,132	31,013	433,445
	74,690	6,635	5,691	3,462	90,478	149,642	6,579	29,056	16,483	201,760	89,995	12,804	39,721	6,038	Service America	314,327	26,018	74,468	25,983	440,796

82. The following table gives the duties obtained during the kharif and rabi seasons on the several canals for the last three years:—

DUTY OF

Acres.	
	Duty.
2 3 4 5 6	7
Eastern Main Series 82,366 53.97 72,802 61.75 75,490	62:08
Arrah Canal System 141,569 64:35 133,053 82:79 136,794	75.66
Buxar Canal System 93,006 64 05 93,206 86 70 92 494	77.73
Western Main Series 234,575 63.38 226,259 83.52 229,288	76-04
Sone Canals 316.941 goes san con	72.03

But these duties are of no practical value, as the real duty of the water is that of the maximum period of demand in October.

Rabi.

	THE STATE OF THE S			1897-98.		1898-99.	
1		2	3	4	5	6	7
- 1965 A		Acres.	Duty.	Acres.	Duty.	Acres.	Duty.
Eastern Main Series		23,879	64.19	12,896	54-64	11,526	48.63
Arrah Canal System		76,523	87:26	51, 360	78.65	48,483	93.06
Buxar Canal System .		114,988	125.40	39,115	74.93	50,026	75.45
Western Main Series .		191,511	106.75	90,475	77.00	98,509	83.20
Sone Canals		215,390	99.44	103,371	73-31	110,035	77.44

The Superintending Engineer writes :-

"On the assumption that the whole kharif area was irrigated during the ten days of maximum demand in October, the duty works out to 55 acres per cubic foot of discharge in the Main Western Canal. This, though higher than in 1896-97, may be attributed to the greater moisture in the soil in the year under review owing to the very heavy rain in the early part of September. On the Main Eastern Canal the duty is given by the Executive Engineer as 53 acres nearly. The kharif season duty is vitiated by the running of the flushes to clear silt. A slightly better duty was obtained during the rabi season.

"The Executive Engineer of the Arrah Division repeats the table, which has now been given for some years, showing the aggregate depth of water placed on the rice-fields, on the

given for some years, showing the aggregate depth of water placed on the rice-fields, on the hypothesis that the entire 'utilized' discharge of the canal reached the fields. The figures take cognizance of the months July to October inclusive, thus:—

YEAR.		TE DEPTH.	Total
	Rainfall.	Canal water.	
1	2	3	4
	Feet.	Feet.	Feet.
1887-88		2.60	5.16
1888-89 1889-90		2.93	6.40
1890-91	The state of the s	2.62	5.43
1891-92	1.00	2.42	5.78
1892-93	0.00	3.75	5.35
1893-94	0.00	3.04	5.41
1894-95	3.59	2·14 2·09	5.03
1895-96		3.02	5.68
1896-97	1.56	3.22	5.35
1897-98	3.29	2.37	4.78
1898-99	3.94	2.31	5·66 6·25

The total area irrigated on the distributaries during the year and the duty of water on them are shown in the subjoined abstract statement. The detail of each distributary is given in Appendix II.

The season duty as given in the tables is of little practical use so far as the kharif irrigation is concerned, as its limitation is the duty obtainable during the "Hathia." A comparison made by the Executive Engineer, Arrah Division, for a number of distributaries in the Koath subdivision shows the "Hathia" or effective duty to be on an average one-third of the season duty. Some experiments were made on the loss of water in distributaries in the Eastern Sone and

SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899. 2089

Arrah Divisions. The loss per cent. per mile varies from about 1 to 3.5 cubic feet according to the nature of the soil through which the distributaries run:—

DISTRIBUTARY.		Areas irriga	TED IN ACRE	8.	MEAN I	OUTY IN A	ACRES PER ISCHARGE.	
	Kharif.	Rabi.	Hot- weather.	Total.	Kharif.	Rabi	Hot- weather.	REMARK
i i i i i i i i i i i i i i i i i i i	2	3	4	5	6	7	8	9
Eastern Sone Division.		Pro-Barrer				Stepan :		
stributaries on the Eastern Main Canal.	2,393	204	95	2,692	100	19	24	
stributaries on the Patna Canal (Daudagar subdivision).	36,528	5,496	775	42,799	75	54	9	
Ditto ditto (Bikram ubdivision).	36,571	5,823	2,592	44,986	67	39	21	
Total Patna Canal	73,099	11,319	3,367	87,785	71	46	15	
Total Eastern Sone Division	75,492	11,523	3,462	90,477				
Arrah Division.			t sertio o ous auto					
ibutaries on the Arrah Canal (Nasri-	27,252	8,964	8,006	39,222	96	60	48	
Ditto, ditto (Agiaon division).	28,113	4,254	2,291	34,658	107	42	40	
Total Arrah Canal	55,365	13,218	5,297	73,880	102	51	44	4.5
ibutaries on the Dumraon Branch al (Koath subdivision).	42,543	19,006	6,008	67,557	76	62	29	
Oitto on the Bihia Branch Canal umnagar subdivision).	38,886	16,174	5,129	60,189	72	71	16	
Total Arrah Division	1,36,794	48,398	16,434	2,01,626				A.
Buxar Division.		y - 1 (2) 1 a						
butaries on the Main Western Canal mul subdivision).	5,525	2,877	629	9,031	80	76	50-	
Ditto ditto (Jam-	2,115	884	195	3,194	157	145	42	
Ditto ditto (Basa-subdivision).	2,761	2,416	52	5,229	130	129		
Total Main Western Canal	10,401	6,177	876	17,454	122	117	46	
butaries on the Buxar Canal	43,395	23,684	4,180	71,259	68	78	18	
itto Chowsa Branch Canal (Jam-subdivision).	29,749	13,290	982	44,021	149	118	44	
itto Garra Chowbe Branch Canal sawan subdivision).	8,949	6,875		15,824	96	113		
Total Buxar Division	92,494	50,026	6,038	148,558	1 ()			
Total Sone Canals	304,780	109,947	25,934	440,661				

CROP EXPERI-MENTS,

83. Crop experiments.—The results of the experiments made during the year to determine the yield of rice and wheat crops irrigated from the canal are given in the following tables:—

TABLE I.—RICE.

Result of experiments on "good" rice crops irrigated with canal water for the year 1898-99.

	experi-	Aver	AGE YIE WEIGHI	LD PER	
Division.	of o	Grain.		Straw.	
	Number ments.	Maunds.	Seers.	Maunds.	Seers.
. 1	2	8	4	5	6
Eastern Sone Arrah Buxar	4 10 6	32 30 28	22 9 9	49 43 50	28 21 29
Sone Circle average	20	30	4	46	35

N.B.—A good crop means a crop decidedly above the ordinary crop in the village in which it was taken.

TABLE II.—RICE.

Result of experiments on "average" rice crops irrigated with canal water for the year 1898-99.

Eastern Sone	::	20	23	28	36	15
Arrah		50	21	16	35	
Buxar		31	22	3	30	26
Sone Circle average	•••	101	22	3	33	38

N.B.—An "average" crop means a crop that was considered a fair average of the whole crop in any village in which an experiment was made.

TABLE III .- RICE.

Result of experiments on "good" rice crops irrigated without canal water for the year 1898-99.

Eastern Sone Arrah Buxar	2 14 1	21 25 22	10 27 	43 43 39	24 1
Sone Circle average	17	24	38	42	34

TABLE IV .- RICE.

Result of experiments on "average" crops irrigated without canal water for the year 1898-99.

Eastern Sone Arrah Buxar	::	22 29 31	21 17 14	19 15 33	34 33 22	14 16 28
Sone Circle average	•••	82	17	21	29	25

The difference between Table I and Table III shows 5 maunds 6 seers of grain per acre in favour of the canal-irrigated lands. In the previous year, when there was better rainfall in October, the similar difference was only 1 maund 7 seers. The Superintending Engineer is of opinion that this

difference illustrates the fact that the crops which are matured without canalwater suffer much more in a comparatively dry October than crops irrigated from the canals.

The following tables deal with rabi crops. The results indicate little or no difference between the yield of crops irrigated from canal water and those otherwise raised:—

Table I.—Rabi.

Result of experiments on "good" rabi crops irrigated with canal water for the year 1898-99.

		IRE	GATED W	TITH CA	NAL WAT	ER.			
Division.	Staple.	experi-	AVERAGE YIELD PER ACRE.						
,	Staple.	of	Grain.		Straw.				
		Number ments	Maunds.	Seers.	Maunds.	Seers			
1	2	3	4	5	6	7			
Eastern Sone Arrah Buxar	Wheat ,,	 8 2	20 15	 26 23	30 15	 10 30			
Sone Circle average		10	19	25	27	14			

TABLE II.—RABI.

Result of experiments on "average" rabi crops irrigated with canal water for the year 1898-99.

Arrah	Wheat ,,	9 24 19	14 17 10	16 1 31	18 20 11	28 39 17
Sone Circle average		52	14	11	17	4

TABLE IA .- RABI.

Result of experiments on "good" rabi crops irrigated without canal water for the year 1898-99.

		IRRIGATED WITHOUT CANAL WATER.							
Division.	G4 - 1	xperi-	Average vield per acre.						
	Staple.	r of experi-	Gr	in.	Straw.				
		Number ments	Maunds.	Seers.	Maunds.	Seers			
1	2	- 3	-4	5	6	7			
Eastern Sone Arrah Buxar	Wheat	10 2	19 18 10	26 5 14	21 20 8	29 34 36			
Sone Circle average	ad o	16	17	21	19	23			

TABLE IIA .- RABI.

Result of experiments on "average" rabi crops irrigated without canal-water for the year 1898-99.

	History (1975)	IRI	RIGATED	WITH WATER	OUT CAN	AL		
		experi-	Average yield per acre.					
Division.	Staple.	of	Gra	in.	Straw.			
and har Belling		Number	Maunds.	Seers.	Maunds.	Seers		
1	2	8	4	5	6	7		
Eastern Sone Arrah Buxar	Wheat	5 10 14	13 15 9	39 21 33	22 21 10	18 21 16		
Sone Circle average	•••	29	12	20	16	13		

84. The demands, collections, and balances of water-rates for the last five AND BALAN- years are shown below:-

	YEAR.	Amount outstand- ing at commence- ment of year.	Amount falling due for recovery during the year.	Total for recovery.	Cash realisation.	Remitted or written off.	Balance at the end of the year.
	1 .	2	3	. 4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1894-9	***	1,01,858	6,86,905	7,88,763	7,43,863	4,091	40,809
1895-9		40,809	6,56,246	6,97,055	6,69,045	5,017	22,993
1896-9		22,993	9,50,866	9,78,859	9,58,926	5,505	9,428
1897-9		9,428	11,38,356	11,47,784	11,42,244	4,065	1,475
1898-9	9	1,475	9,30,504	9,31,979	9,29,016	2,963	Art Davids

ARREARS.

85. The following statement shows the extent to which the arrears as well as the current demand have been worked off:-

An and the second of the second	Demand of 1898-99, consisting of—	Collected or remitted in 1898-99.	Percentage of demand adjusted.	Unadjusted balance at close of year.
1	2	8	4	5
Adding Foliage	Rs.	Rs.	rithma are an are	Rs.
Arrears outstanding on 1st April 1898 Current demand for 1898-99	1,475 9,28,088	1,475 9,28,088	100 100	·
Total	9,29,563	9,29,563	100	palar Present

The fact that the entire outstanding demand of the previous year and the current demand of the year itself have been adjusted in full is exceedingly satisfactory. The results are highly creditable to the Deputy Collector, Moulvi Syed Mahomed Nasiruddin, and his staff.

The following statement gives the collections in each district: COLLECTION.

DISTRICT.		DEMAND.		Adjustments.			。 第二十四十二十四十四十四十四十四十四十四十四十四十四十四十四十四十四十四十四十四			Percen-
100 may 100 ma	Arrears on 31st March 1898.	Current demand for 1898-99.	Total.	Collection.	Remission made by canal officers,	Written off as irreco- verable.	Total.	Balance on 31st March 1899.	tages, column on column	
1	2	8	4		6	7	8	9	10	
	Rs. 1,450	Rs. 7,36,724	Rs. 7,38,174	Rs. 7,35,382	Rs. 2,404	Rs.	Rs. 7,38,174	Rs.	Rs.	
	25	88,113	88,138	88,064	7		88,138	Nil	100	
aya		1,03,251	1,03,251	1,03,154	97	*	1,03,251	Nil	100	
Total	1,475	9,28,088	9,29,563	9,26,600	2,575	388	9,29,563	Nil	100	

Besides the collections of water-rates amounting to Rs. 9,26,600 shown above, a further sum of Rs. 2,776 was collected as miscellaneous revenue by the Canal Revenue Department and credited to water-rate accounts.

87. The sums remitted in 1898-99 and previous five years, according to REMISSIONS.

the figures supplied by the Superintending Engineer, were:-

	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99
1	2	3	4	5	6	7	8
; W.:	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
i. Written off by Civil officers as	3,226	2,665	3,811	716	722	2,228	
ii. Remissions granted by Executive Engineers, including refunds.	2,180	2,640	2,430	8,529	10,050	5,166	38 8 2,992
ii. Extraordinary remissions by Superintending Engineers.		189	298	730	428	329	701
iv. Remitted on revised and cancelled khatians.	15,251	8,370	3,574	4,527	2,250	6,794	1,520
Total	20,657	13,864	10,113	14,502	13,450	14.5	
Number of certificates issued during	2,219	2 019	10:0		10,100	14,517	5,601
the year.		~,019	1,253	1,036	774	1,460	376

There was considerable improvement during the year in all items connected with the refund or remission of water-rates. The total amount remitted was Rs. 5,601, against Rs. 13,450, in the previous year and Rs. 14,517 in the average of the previous five years. The heading it includes both remissions and refunds; the remissions are, in most cases, the correction of wrong assessments made before the demands have been collected; the refunds are mostly similar assessments which have been collected and have to be refunded in cash. It is these last which give the most trouble, both to the people, who pay improperly, and to the collecting staff which has to collect and then to refund. It is satisfactory to notice that these refunds which were Rs. 7,136 in 1897-98 were only Rs. 1,118 in 1898-99, indicating that a larger proportion of remission papers reached the Deputy Collector before the rates were collected Of the extraordinary remissions of Rs. 701, the amount remitted by the Superintending Engineer was Rs. 81 only, and the balance, Rs. 620, was written off as unsettled balance outstanding for three years, which could not be vouched for by actual receipts pending in the hands of the collecting officers. But the most satisfactory feature of all is the marked reduction of the numbers of certificates issued. During the previous five years the average number was 1,460, but in the year

under review the entire sum has been collected with only 376 certificates. This fact indicates that the people are contented and pay their water-rates willingly.

The following table gives the details of the remissions (including refunds)
made by Executive Engineers by Divisions:—

Class.	Causes.	Eastern Sone Division.	Arrah Division.	Buxar Division.	Total 1898-99.	Total 1897-98.
1	2	3	4	5	6	7
	•	Rs.	Rs.	Rs.	Rs.	Rs.
а	Charge by mistake for land cultivated by others				ateus arge	erialise
b	Excess measurement or errors in calculation	25	395	223	643	1,508
c	Lift charged as flow	8	15	20	43	313
d	Irrigation not denied, but remitted as not chargeable under the Act	2	17	25	44	68
0	Land not having been irrigated at all	67	119	188	374	1,083
f	Injury to crop due to insufficient supply	•••	38	30	68	1,711
g	Land thrown temporarily out of cultivation (applicable to long leases only)	24	11	69	104	. 8
h	Failure of crop originally shown, Rule 82	72	753	763	1,588	5,040
i	Land appropriated for other purposes than cultivation	6	2	23	31	29
j	Double assessment, as when land assessed on a season lease is subse- quently included in a long lease		1. 1. 40			
.01	in the same year	0	83	56	97	290
	Total	212	1,383	1,397	2,992	10,050

The totals for the last six years are given below:-

1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
2,180	2,640	2,430	8,529	10,050	5,166	2,992

More than half the amount remitted during the year by Executive Engineers was on account of failure of crops, for which a reduced rate was levied. It occurred chiefly in the hot-weather season.

The percentage of remissions on the gross demand was as follows in each Division:—

Percentage of remissions

			Co gross d	emand.
			1897-98.	1898-99.
Eastern So	ne Division		0.17	0.08
Arrah	ditto	 	0.26	0.22
Buyer	ditto		0.97	0.95

88. The following statement shows the cost of the revenue establishment for the last five years:—

REVENUE ESTABLISH-MENT.

Particulars.	1894-95.	1895-96.	1896-97.	1897-98.	1898 99.
100 to 10	2	3	4	5	6
Establishment under Collector	Rs.	Rs.	Rs.	Rs.	Rs.
1. Permanent establishment, including travelling allowances 2. Temporary establishment 3. Contingencies 4. Headmen's fees 5. Fees to patwaris	54,311 3,217 5,596 8,309 114	55,466 3,960 4,248 9,431	62,633 8,030 6,053 99	66,259 5,553 6,048	65,870 4,874 4,783
6. Fees to contractors of long-term leases	•••	2,485	2,674	2,643	2,562
Total establishment under Collector Establishment under Superintending and Executive Engineers.	71,547	75,590	74,489	80,503	77,089
Permanent and temporary establishment, including travelling allowances Contingencies Water-regulation establishment Headmen's fees	45,335 3,936 2,246 23,896	46,703 2,745 2,270 15,003	51,357 4.240 2,357 18,087	50,085 5,494 2,573 24,203	46,175 4,786 2,316 22,326
Total establishment under Executive Engineers.	75,413	66,721	76,041	82,355	75,603
Total	1,46,960	1,42,311	1,50,530	1,62,858	1,52,692
Collections of water-rates and miscellaneous revenue by the Canal Revenue Department	7,45,691 19·7	6,79,702 20·9	9,59,350 15·6	11,43,593 14·2	

There was a total reduction of Rs. 10,166 in the cost of establishment on account of the less demand for the year. The reduction took place under all heads. The decrease under permanent and temporary establishments, including travelling allowances and contingencies, was chiefly due to grain allowances being stopped, to a smaller number of substitutes being employed in place of men on leave, to a reduction in the number of the temporary establishment and to the reduction in headmen's fees which followed the reduction in demand. The Chief Engineer believes that a reduction is still possible in the establishment under the Deputy Collector, and trusts that the Superintending Engineer will see if it cannot be effected.

89. The total cost of the revenue establishment under each Executive Engineer, per acre irrigated, is shown below:—

COST PER

The property of the same	in the	1898-99.				
Division.	Revenue* establishment.	Area irrigated.	Cost per acre.	Cost per acre.		
1	2	3	4	5		
	Rs.	Acres.	А. р.	А. р.		
Eastern Sone	17,933	90,478	3 2	3 3		
Arrah	31,081	201,760	3 2 2 6	3 3 2 7		
Buxar	26,588	148,558	2 10	3 6		
Total Sone Canals	75,602	440,796	2 9	3 0		

Includes proportion of water-regulation establishment employed on the head-works.

COMPLAINTS.

90. The following statement gives particulars of the disposal of complaints. Claims for ordinary remission are distinguished from other complaints, such as petitions alleging damage from the canals, complaints against individuals, and other miscellaneous claims. The totals are compared with those of the two previous years:-

e e	CLAIMS	FOR ORDINA	RY REMISS	ION—	OTHER	COMPLAIN	778—	Total complaints	
Division.	Received during the	Dispo	sed of—		Received			received during the year, excluding	Pending
-4	year and pend- ing from previous year.	Remission allowed.	Remission refused.	Pending.	during the year and pending from last year.	Disposed of.	Pending.	those pend. ing from previous year.	conding
1	2	8	4		6	7	8	9	10
	No.	No.	No.	No.	No.	No.	No.	No.	No.
Eastern Sone	187	99	82	6	92	91	1	270	7
Arrah	1,562	743	743	76	1,008	1,055	13	2,573	89
Buxar	1,302	463	783	56	500	493	7	1,528	63
Total, 1898-99	3,051	1,305	1,608	138	1,660	1,639	21	4,371	159
Total, 1897-98	4,251	1,806	2,224	221	2,140	2,021	119	5,351	840
Total, 1896-97	8,928	3,303	4,780	845	588	393	195	9,005	1,040

The reduction in the number of complaints pending at the close of the year from 340 to 159 is satisfactory. There has been a marked improvement in the Buxar Division, but the large figures in 1896-97 were due to the heavy APPEALS. demand for rabi irrigation in that year.

91. The following statement shows the number of appeals to the Collectors of districts against Executive Engineers' decisions on a total of 4,552 cases of complaints and how they were disposed of:-

Division.	Number o	F APPEALS-	A1-			
DIVISION.	Pending from last year.	Instituted dur- ing the year.	Appeals allowed.	Appeals discharged.	Pending.	
1	2	8	4	5	6	
	No.	No.	No.	No.	No.	
Eastern Sone					1025	
Arrah	1	6	2	4	1	
Buxar		2		2		
Total	1	8	2	6	1	

Of the appeal cases, two were against assessment for unauthorised irriga-

tion rates. Of these two, one only was modified.

PASES UNDER

92. Thirty-seven cases were tried by Executive Engineers vested with or 1876.

OF 1876.

OF 49 discharmed. The first imposed executed to Parallel Of the 27 areas. and 49 discharged. The fines imposed amounted to Rs. 180. Of the 37 cases, 35 were instituted in the Bikrum subdivision, the result being 20 convictions and 15 acquittals. They were principally for neglecting to prevent wastage of water from village channels, interference with supply and obstructing flow, under section 93 of the Irrigation Act. Only one case was tried under section 16 of the Navigation Act V of 1864.

93. The usual comparative statement of certificate cases instituted during 1897-98 and 1898-99 against defaulters for failing to pay water-rates, in the districts of Shahabad, Patna, and Gaya, is given below:—

CERTIFICATE CASES.

The second secon		SHAH	ABAD.		-	PA	TNA.			G	AYA.	1000		То	TAL.	
	189	7-98.	1898	3-99.	18	97-98.	18	98-99.	18	97-98.	1898	3-99.	189	7-98.	1898	-99.
(2000) (2	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount.	Number.	Amount,	Number.	Amount.	Number.	Amount.	Number.	Amount.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
		Rs.		Rs.		Rs.	13 . C	Rs.	100	Rs.		Rs.	industry.	Rs.		Rs.
ses pending at the close of the pre- ceding year. ses instituted during the year	738	717 10,038	367	361 6,171	25	260	8	118					8 774	717	3 376	361 6,290
Total	746	10,755	370	6,532	25	260	- 8	118	11	71	1	1	782	11,086	379	6,651
s disposed of— being struck off, owing to the de- nand having been remitted and ancelled.	9	147	8	314						,			9	147	8	314
being wholly satisfied	734	10,247	362	6,218	25	260	8	118	11	71	1	1	770	10,578	371	6,337
Total	743	10,394	370	6,532	25	260	8	118	11	71	1	1	779	10,725	379	6,651
accoutstanding at close of the year	. 3	361	16.00 July 1										3	361	Nil	Nil

94. The navigation receipts for the last five years are shown in the NAVIGATION.

NAVIGATION RECEIPTS.

	EASTE	EN MAIN	SERIES.	ERIES. WESTERN MAIN SERIES.				
YEAR.	Number of miles open.	Tollage receipts.	Transport service receipts.	Number of miles open.	Tollage receipts.	Transport service receipts.	Total.	Total tollage only.
1	2	3	4	5	6	7	8	9
.894-95 1895-96 1896-97 1897-98 1893-99	No. 864 864 864 864 864	Rs. 19.787 22,082 20,249 22,687 37,394	rs to	No. 1321 1321 1321 1321 1321 1321	Rs. 29,562 29,288 36,196 42,355 55,657	Rs. 9,550* 9,891* 13,561* 23,384* 12,512*	Rs. 58,899 61,261 70,006 88,426 1,05,563	Rs. 49,349 51,370 56,445 65,042 93,051

[•] There is no longer any Government transport service. These receipts are on account of hire of steamers, boats and sundries.

The receipts show an increase of Rs. 17,137 compared with the previous year, and are the largest on record since the opening of the canals for traffic. The increase is mainly due to the transport of coal and building materials to Dehri for the Mogulserai-Gaya Railway. This traffic will now soon cease. There was also a large export in oil seeds, food-grains, timber and bamboos, which contributed partly to the increase.

TOLLAGE (ASSESSED).

TOLLAGE

YEAR.	Patna Canal system.	Arrah Canal system.	Buxar Canal system.	Total.
1	2	3.	4	. 5
1894-95 1895-96 1896-97 1897-98 1898-99	Rs. 19,663 21,892 20,476 22,750 37,295	Rs. 19,837 17,861 28,105 31,790 44,391	Rs. 9,830 11,273 9,544 9,505 10,889	Rs. 49,300 51,026 58,125 64,045 92,575

TRAFFIC.

COMPARISON OF TRAFFIC.

	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
1	2	. 8	4	5	6
Number of miles open Toll collections Rs. Collections per mile ,, Boats, including empties No. Tonnage of boats Tons	49,319 226 6,119	218½ 51,370 235 5,838 78,441	218½ 56,445 258 6,944 105,565	$ \begin{array}{r} 218\frac{1}{2} \\ 65,042 \\ 297 \\ 9,070 \\ 130,216 \end{array} $	218 3 93,051 426 10,066 1,63,866
Estimated value of cargo, including rafts Rs.	49,20,464	50,04,985	57,37,241	65,65,729	75,70,815

STEAMER SERVICE. 95. The steamer service on the canals continued to be worked by Messrs. Radford and Company.

The following table shows the extent of the steamer traffic worked by

them:-

Particulars.	Patna Canal.	Arrah Canal.	Buxar Canal.	Total.
1 resource (Test English) - sept. (a	2	3	4	5
Passengers carried { Up No. Down ,,	4,165 ½ 4,017	11,863½ 13,435½	6,133 6,315	$22,162$ $23,767\frac{1}{2}$
Cargo carried { Up Tons Down ,,	1,129 1,249	887 829	520 8 8 9	2,536 2,967

During the year the traffic on the Buxar Canal, which had fallen off in last year, revived to some extent. On the Patna and Arrah Canals it remained steady.

On the Patna Canal the steamer makes one trip a week each way. On the Arrah and Buxar Canals there is a service twice in the week. The receipts from the transport service on account of the hire of accommodation boats, mud punts, and jolly boats was Rs. 12,512, as compared with Rs. 17,354 in the previous year.

The four steamers and 42 of the mud punts, having been sold, and the railway works for the conveyance of the materials for which mud punts were hired by Messrs. Bird and Company nearing completion, the receipts under

this head in future years will be insignificant.

MISCELLANE-OUS RECEIPTS. 96. The details of the miscellaneous receipts for the last five years are given below:—

PARTICULARS.	1893-94.	1894-95,	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-09
1 - 1 - 1 - 1 - 1 - 1 - 1	2	1 / 2 3	ala.tana	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sale of water	730	867	347	1,280	541	753	1,547
Plantations	1,164	1,671	3,239	2,958	1,714	2,149	2,883
Other canal produce	1,651	2,793	1,605	1,027	821	1,579	1,466
Water-power	978	1,715	1,180	1,347	1,015	1,247	1,031
Rent of buildings	8,921	8,267	8,068	9,354	8,506	8,623	8,597 166
Fines	20	456	218	208	144	209	23,327
Rent of lands	9,014	12,772	13,279	13,030	17,784	13,176	479
Missellangons I Cost of process	697 2,528	582	553	342	477	1,907	326
Sale of old materials	139	2,432	1,893	1,539 279	1,144 156	119	53
Other items	3,736	4,054	2,758	5,597	4,002	4,030	810
Total	29,578	35,620	33,148	36,961	36,304	34,322	40,685

The increase in land rents is satisfactory. The matter is receiving the attention of the Superintending Engineer, and the receipts under this head should continue to increase gradually.

97. The number of trees, classified according to size, in the plantations on Plantations the canals in each division, compared with the previous year, is shownbelow :-

		1897	-98.			1898	8-99.		Strong.	
DIVISION.	Trees over 12 feet in height,	Saplings be- tween 4 and 12 feet,	Seedlings under 4 feet,	Total,	Trees over 12 feet in height.	Saplings be- tween 4 and 12 feet.	Seedlings under 4 feet,	Total.	Increase,	Decrease,
1	2	3	4	5	6	7	8	9	10	13
Bastern Sone	No. 100,914 66,200 46,565 27,255	No. 19,460 10,954 6,536 8,791	No. 30,933 16,424 3,485 10,008	No. 151,307 93,578 56,586 46,054	No. 98,504 64,223 41,401 27,636	No. 22,758 13,522 13,043 8,913	No. 33,962 20,785 7,339 10,445	No. 155,219 98,530 61,783 46,994	No. 3,912 4,952 5,197 940	No
Total	240,934	45,741	60,850	347,525	231,764	58,231	72,531	362,526	15,001	

There was an increase of 15,001 trees during the year. The increase took place in all divisions.

The financial results of the tree plantations for the last two years are expressed in the following table:-

Division,	RECI	EIPTS.	EXPENDITURE.		
	1897-98.	1898-99.	1897-98.	1898-99	
1	2	3	4	5	
	Rs.	Rs.	Rs.	Rs.	
Eastern Sone Arrah Dehri Workshop Subdivi-	922 469	1,133 822	1,048 1,757	999 706	
sion.	250	771	1,556	1,693	
Buxar	73	157	1,057	1,027	
Total	1,714	2,883	5,418	4,425	

The receipts are Rs. 1,169 more, and the expenditure Rs. 993 less, than

in the previous year. A number of trees died, especially in the Arrah Division, which were cut down, sold, and credited to "Plantations."

98. The floods in the Sone during the year were of less maximum height than those of 1897, but were more uniformly continuous, and necessitated more frequent closures of the canals. The highest level at the Dehri weir was 1.10 feet lower than the highest level in 1897-98, and that at the Barun weir 1.50 feet as is shown in the statement below:

RIVE	R	SON	E.

		KIY	ER SONE.				
Locality,		21st August 197.		15th August 98.	Highest known, 1876.		
Liveabiti,	Above weir.	Below weir.	Above weir.	Below weir.	Above weir,	Below weir.	
1	2	3	4	5	6	7	
Dehri Barun	R. L. 338-85 340-90	R. L. 837·80 339·00	R. L. 337 75 339·40	R. L. 336·70 337·40	R. L. 342·10 343·50	R. L. 341.00 342.70	

The highest flood readings recorded in this circle for the river Ganges in 1898-99 were:-

River Ganges.

LOCALITY.	Date.	Reading.	Highest known since 1875.			
		reading.	Date.	Reading		
1	2	3	4	5		
Duxar Beegah Hajipur, confluence of rivers Ganges and Gandak.	1st September 1898 1st ,, ,, 2nd ,, ,,	R. L. 200·47 168·44 164·80	6th August 1875 14th ,, 1879 14th ,, ,,	R. L. 200 71 169 58 166 20		

MAINTENANCE CHARGES AND REPAIRS.

99. The expenditure on maintenance and repairs, by main sub-heads, for the last five years is shown below:-

Particulars.	.1893.94.	1894-95	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898
1	2	3	4	5	6	7	8
Head works Main canal, including branches Distributaries Drainage and protective works Cost of working transport service Compensation	1,89,160 46,167 3.014	Rs. 29,618 1,48,428 37,802 4,379	Rs. 21,077 75,573 33,101 2,283 23	Rs. 24,188 83,880 42,865 782 2	Rs. 23,202 74,593 38,181 4,039	Rs. 25,077 1,14,327 39,681 2,899 5	Rs. 34.38 87,96 32.32 2,51
Total	2,65,928	2,20,227	1,32,057	1,51,717	1,40,015	1,81,989	1,57,19

The cost of repairs to head works during the last five years was-

	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99
Weir on Sone river Other head works	8 201	Rs. 22,426 5,696	Rs. 13,922 6,344	Rs. 16,542 7,432	Rs. 15,352 7,782	Rs. 17,301 7,111	Rs. 25,858 7,994
Total	26,563	28,122	20,266	23,974	23,134	24,412	33,852

MAINTENANCE OF MAIN CANALS AND DISTRIBU-TARIES.

101. The following table details the expenditure on maintenance and repairs in each division for the last three years:—

	ARE	AH DIVIS	SION.	Bux	AR DIVIS	SION.	EASTER	N SONE D	IVISION.		TOTAL	
Jan Haran	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898
1	2	3	4	,5	6	7	. 8	9	10	11	12	1
Western Main Canal Eastern ditto Canals Branch Canals Distributaries Drainage and protective works	Rs. 15,494 18,663 8,393 17,901 120 60,571	Rs. 10,002 19,787 9,182 17,021 3,556 59,548	Rs. 10,090 18,855 11,835 12,834 1,185 54,799	Rs. 3,216 10,415 9,996 14,761 306	Rs. 2,687 8,596 8,351 12,424 109 32,167	Rs. 3,990 11,712 8,064 10,971 620	Rs. 4,731 13,189 10,200 355	Rs. 2,209 13,848 8,787 874 25,168	Rs. 5,128 18,816 8,517 710 33,171	Rs. 18,710 4,731 42,267 18,389 42,862 781 1,27,740*	Rs. 12,689 2,209 42,231 17,533 38,182 4,039	14 5 49 19 39 2 1,23

^{*} Exclusive of Rs. 23,974, Rs. 2 and Rs. 5,048 expended on maintenance and repairs of Sone weir and head works, compensation

respectively.

† Exclusive of Rs. 23,852, Rs. 12 and Rs. 5,048 expended on maintenance and repairs of Sone weir and head works, compensation of Rs. 23,134 and Rs. 12,184 expended on maintenance and repairs of the Sone weir and head works and refunds, Exclusive of Rs. 23,852, Rs. 14 and Rs. 3,853 expended on maintenance and repairs of the Sone weir and head works, refunds, respectively.

The expenditure on "Maintenance and Repairs" during the year shows a small increase of Rs. 6,444.

102. The following table gives particulars of dredging operations during SILT-CLEARING the year, compared with the results of the two previous years :-DREDGING.

and the second s	1896-97.				1897-98.		1898-99.			
CANALS.	Quantity dredged.	Cost, including removal over spoil bank, or discharge into river.	Rate per 1,000 cubic feet.	Quantity dredged,	Cost, includ- ing removal over spoil bank, or discharge into river.		Quantity dredged.	Cost, includ- ing removal over spoil bank, or discharge into river.	Rate per 1,000 cubic feet.	
1	2 .	3	4	5	6	7	8	9	10	
Eastern Main and Patna Canals	C. ft. 445,649	Rs. 2,759	Rs. A. P.	C. ft. 692,336	Rs. 3,179	Rs. A. P.	C. ft.	Rs.	Rs. A. P.	
Vestern Main Canal (head to regulator). Vestern Main Canal (regula-	34,716	67	1 14 0	221,081	420	1 14 4	151,520	3,188	2 6 1	
tor to 9th mile).	3,244,365	5,079	1 9 0 3 2 4	29,770 1,017,135	1,463	4 9 6	25,086	121	4 13 3	
otal Main Western Canal	31,156	5,244	1 9 4	58,881	251	4 4 2	1,408,935 31,777	2,292 143	$\begin{smallmatrix}1&10&0\\4&8&0\end{smallmatrix}$	
			1 5 4	1,326,867	,2,271	1 11 4	1,617,268	2,917	1 12 9	

The rates given above include the cost of lifting the silt into barges, and

carrying it over the spoil banks or discharging it into the river.

The increase in the quantity dredged in the river Sone was due to the sand banks in the river having advanced towards the weir, so that a deeper channel than usual had to be cut before cross traffic could be established. The extra rate in dredging was due to a large quantity of belting having to be replaced

103. The expenditure on repairs to dredgers is shown below for the last REPAIRS TO DREDGERS. five years :-

	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99
1	2	3	4	5	6	7	8
Forms 2 2 2 2	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Fouracres' dredgers	6,467*	6,036*	3,254*	1,846*	2,110*	3,943	
Bruce's ditto	627	362	114	97	218	284	1,795+
English ditto	3,575	2,724	560	188	239		29
ud punts	3,075	2,508	1,242	724	1,252	1,457 1,760	9 1 6
Total	13,744	11,630	5,170	2,855	3,819	7,444	1,921

Cost of repairs to 12 Fouracres' dredgers.

Ditto to 9 ditto.

The reduction in the cost of maintenance of the dredgers is thus explained by Superintending Engineer:-

"During the year the English and Bruce's dredgers had little done to them: hence the small expenditure shown against them. There being only nine Fouracres' dredgers now, three having been dismantled, the cost of repairs for them is less. To the heavy expenditure last year on repairs to mud punts and the agreement with Messrs. Bird and Company, to whom they were hired, that any damage done was to be made good at their expense, the very small amount expended on them this year is due."

The capital cost of the dredging plant now on the Sone Canals is given below:—

Angerthia.	Two English dredgers.	Two old Bruce's dredgers	Nine Fouracres' dredgers.	Two new Bruce's dredgers.	Mud punts.	Total.
1	2	3	4	5	6	7 .
Capital cost as shown in the Revenue Report of 1897-98 Capital expenditure during 1898-99	Rs. 1,21,205	Rs. 33,027	Rs. 80,176	Rs. 547	Rs. 3,12,863 (—)32,000	Rs. 5,47,818 ()32,000
Total capital cost of plant at end of 1898-99	1,21,205	33,027	80,176	547	2,80,863	5,15,818

The reduction in capital cost is due to the credit of Rs. 32,000 during the year on account of the value of 32 mud punts at Rs. 1,000 each, which was recovered from the Port Commissioners, to whom the punts were sold.

recovered from the Port Commissioners, to whom the punts were sold.

The following statement shows the quantity of silt lifted by each class of dredger and the charges which should be added to the rates for dredging on account of interest on capital and repairs to the plant: no allowance is made for depreciation of the plant:—

	PARTICULARS.		16	Prime cost.	Interest at 4 per cent.	Charge for in- terest per 1,000 cubic feet.	Cost of repairs.	Charge for re- pairs per 1,000 cubic feet.	Charge for in- terest and re- pairs in 1898-99.
	1			2	3	4	5	6	7
Quar	atity of silt lifted.	1	C. ft.	Rs.	Rs.	Rs. A. P.	Rs.	Rs. A. P.	Rs. A. P.
Fouracres' dredgers-	Arrah Division Dehri Workshops subdivision		677,857 553,232 967,231 633,478	=	:	=	=	ä	::
	Total		2,831,798	80,176	3,207	1 2 1	1,795	0 10 1	1 12 2
Bruce's dredgers English or ladder dredgers.	Dista	::	43,277 606,760	33,574 1,21,205	1,343 4,848	31 0 6 7 15 11	29 91	0 10 8 0 2 5	31 11 2 8 2 4
Mud punts-In all Divis	ions		3,481,835	2,80,863	11,235	3 3 7	6		3 3 7
	Total			5,15,818	20,633		1,921		

The gross cost of dredging work done on the Sone Canals, exclusive of hand clearances, is given below. The figures do not include provision for depreciation of the plant:—

Period.	Gross quantity dredged in all divisions.	Cost of "lifting" and "dis- charging."	Repairs to dredg- ing plant.	Total cash expendi- ture.	Interest on capital cost of plant.	Grand total.
1	2	3	4	5	6	7
Average of 5 years ending 31st March 1889	Cubic feet. 10,977,293	Rs. 62,826	Rs. 13,575	Rs. 76,401	Rs. 19,609	Rs. 96,010
Average of 5 years ending 31st March 1894	12,050,753	62,925	14,087	77,012	19,609	96,621
Year 1894-95	9,432,461	40,264	11,630	51,894	24,099	75,993
Year 1895-96	3,550,791	10,238	6,170	15,408	23,700	39,108
Year 1896-97	4,568,553	11,498	2.855	14,353	22,981	37,334
Year 1897-98	3,102,695	9,234	3,819	13,053	21,912	34,965
Year 1898-99	3,481,835	11,321	1,921	13,242	20,633	33,875
Average of five years ending 31st March 1899	4,827,267	16,511	5,079	21,590	22,665	44,255

104. The quantity of silt cleared by hand from main canals in the SHT CLEARED Eastern Sone Division, and the cost, compared with the figures for the two previous years, are shown below:—

		1896-97.			1897-98.			1898-99.	11/1/1/1
	Quantity cleared by hand.	Cost.	Rate.	Quantity, cleared by hand.	Cost.	Rate.	Quantity cleared by hand.	Cost.	Rate.
1	2 .	3		5	6	7	8 .	9	10
Bastern Main and Patna Canals	C. ft. 1,085,945	Rs. 2,858	Rs. A. P. 2 10 1	C. ft. 3,386	Rs. 48	Rs. A. P. 12 11 2	C. ft. 632,899	Rs. 1,591	Rs. A. 1

The Superintending Engineer writes:-

"The quantity cleared by hand in the Eastern Main Canal was immediately inside the Head Sluices for a short extension of the berm towards them, as a bar was found to form there in the wider channel, and also just below the off-take of the Patna Canal, i.e., in the 5th mile. The extension of the berm proved satisfactory, as the bar to a great extent disappeared. In the Patna Canal the silt removed by hand and by dredgers was entirely in the channels just above and below the lock: the closure enabled a larger quantity to be removed by hand than in the previous year, which accounts for the less rate, viz., Rs. 3-3 9, against Rs. 3-12."

The Western Main Canal was closed from 26th March to 9th April 1898, but no silt clearance by hand was carried out between the Regulator and the 9th mile in the Dehri Workshops subdivision during the year under review.

In the Arrah Division silt clearance by hand to the extent of 435,112 cubic feet, costing Rs. 953, was executed in the lock channels during the closure of the canal.

In the Buxar Division during the closure the following silt clearances were effected by hand:—

				C. ft.	Cost.
Western W. G.					Rs.
Western Main Canal and Locks I to VIII, Buxar	d its dist	ributaries and branches and	die	399,342	992
tributaries		•••		245,727	612
		Total			
		Total		645,069	1,604

105. The following figures give the cost of weed-clearing for the last five years:—

WEED CLEARING.

Division.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99
1	2	3	4	. 5	6	7	8
Fort 0	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Eastern Sone Arrah Dehri Workshops Buxar	584 1,391 1,656 1,134	638 2,273 179	346 1,748 123	3 108 1,218 451	 74 97 885	118 512 1,398 454	 9 89 189
Total	4,765	3,090	2,221	1,780	556	2,482	287

The cost of weed clearance in the Sone Canals has greatly reduced in late years. The result is a considerable saving in expenditure. The Executive Engineer of the Arrah Division, Mr. DeMello, has made various observations and experiments in one of the lower reaches of the Canal, which tend to show

that the diminution in the weeds is mainly due to the large discharges which have been kept up, of late years, in the Canal to flush the Canal. The Chief Engineer is disposed to think that the reduction in the weeds, at the heads of the Canals, is due partly to this, but, mainly, to the fact that the flushing system has resulted in removing the deposits of mud, and substituting fine sand, to a large extent, in the channels.

The Superintending Engineer writes :-

"The amounts shown as expended in the Arrah Division and Dehri Workshops were for clearing the sites where the discharge observations are taken. There was actually no weed clearance proper, except in two reaches of the Buxar Canal, and, as subsequent events showed, these might have been left alone. In connection with the subject of weed clearance

Mr. DeMello, Executive Engineer, Arrah Division, writes :-

'The weeds have again been kept down by the system of flushing the canal during the cold and hot-weather months. The result was perfectly satisfactory both in the Western Main and Arrah Canals, the only drawback being that the system has to be intelligently worked and the results to be carefully watched, owing to the constant changes effected by the growth and decay of the weeds.' He gives instances to show the necessity of the watchfulness and intelligence required in working the system but for which weed clearance would certainly have been started, and adds:—'Further experience will hereafter enable the Subdivisional Officers to meet the varying circumstances that occur during the season, but at present it is somewhat novel, and they have to be carefully guided. In working this system the aim has been to run the canal as high as possible, while at the same time keeping the surface slope as great as possible by lowering the gauge levels at the end of the reach.' That weeds grow in most of the reaches of the canals is undeniable, but the Superintending Engineer is of opinion that if the system of flushing described above is adopted, their removal is unnecessary, so long as all the water required for irrigation at the period of their most vigorous growth can be supplied, and so far there has been no trouble in this respect. The obstruction to navigation is of small consequence. Possibly the weeds may retard the passage of a steamer between the terminal stations an hour. As soon as the floods set in they die down to revive again in the cold weather."

MILEAGE RATES OF REPAIRS OF CANALS AND DISTRIBUTA-RIES.

106. The following statement compares the cost of repairs to main canals and distributaries per mile, during the year, with the cost in the two previous years:—

		189	6-97.	189	7-98.	189	8-99.
Canal.	Division.	Number of miles.	Cost per mile.	Number of miles.	Cost per mile.	Number of miles.	Cost per mile
1	2	3	4	5	6	7	8
Eastern Main Canal	Eastern Sone Dehri Workshops Sub- division.	No. 71 9	Rs. 625 1,721	No. 71 9	Rs. 277 1,111	No 71 9	Rs. 680 1,121
Western ditto { Buxar Canal Patna do	Buxar Do Kastern Sone	12½ 45½ 79	257 230 167	12½ 45½ 79	215 190 175	12½ 45¼ 79	319 259 238
Arrah do Dumraon Branch Behea do	Arrah Do Do	65½ 40¼ 31	279 117 119	65½ 40¼ 31	296 139 115	65½ 4 ¼ 31	282 157 178
Chowsa do. Gurrah Chowbey Branch	Buxar Do	39½ 38 470	135 122 38	39½ 38 470	120 95 36	39½ 38 472	126 81 27
Distributaries {	Buxar Eastern Sone	409 3501	36 29	409 3501	30 25	409 3501	27 24

The reduction in the cost of the repairs of the distributaries in the Arrah Division is satisfactory. The expenditure in this Division, which used to be on a rather lavish scale, has now been reduced to a very moderate figure: this, the Chief Engineer is aware, is mainly due to the steady perseverance of the Executive Engineer, Mr. DeMello.

107. The receipts during the year from the mills were Rs. 1,031, against Rs. 1,015 in 1897-98, and the expenditure incurred on their upkeep was Rs. 382, against Rs. 240 in the previous year. The Nasriganj turbine was not leased during the year owing to the depression in the sugar trade caused by the importation of bounty-fed sugar. The amount realised was on account of rent of the previous year.

MILLS.

CALCUTTA AND EASTERN CANALS.

gentiar see tage to the control of t

108. The Capital and Revenue Accounts of these canals are given CAPITAL below:-

ingerial garantei	1.—CAPITAL	ACCOUNT.	
	HEADS OF ACCOUNT.	Outlay during 1898-99.	Outlay to end of 1898-99.
	1 ,	2	3
enend		Rs.	Rs.
and some	Direct charges Less—Receipts on Capital Account	64,993	64,23,478 54,467
Sandi Lon Sandi Li	Total direct charges	64,993	63,69,011
ed, tyrce veilaer	Indirect charges	1,293	92,241

The canalization of the Bhangore khal, chargeable to the Capital Account of the Calcutta and Eastern Canals, was completed during the year. The cost of the work is given in the following statement:—

Sub-head of wo	Expenditure during the year.	Expenditure to end of 1898-99.	Amount as per sanctioned estimate.	
1	2	3	4	
D.—Regulator F.—Drainage and sluices G.—Bridges I.—Navigation K.—Buildings I.—Earthwork	al	Rs. 11,990 29,027 1,953 9,170 52,140	Rs. 45,050 87,587 3,70,850 9,469 3,56,789 8,69,745	Rs. 46,676 80,357 10,000 10,000 3,84,572 30,000 2,87,204 8,48,809
Establishment Tools and plant	•	9,234	1,90,166 21,486	1,84,491 24,064
Total Direct Charge	ns	61,374	10,81,397	10,57,364

The work done during the year was the remodelling of the old khal at Kulti and connecting it with the supply sluice. The accounts of the whole work were finally closed before the end of the year.

REVENUE ACCOUNT.

2.—REVENUE ACCOUNT—(Actuals).

Section of the sectio	EXPEND	TURE-			RECEI	PTS —
	During 1897-98.	During 1898-99.			During 1897-98.	During 1898-99
1	2	8	4		5	6
DIRECT CHARGES.	Rs.	Rs.	*		Rs.	Rs.
I.—Works, mainten- ance and repairs II.—Revenue man-	1,60,543	2,25,938	30.		4,15,556 10,794	3,77,092 32,682
agement Total direct charges	36,600 1,97,143	2,66,873	Total		4,26,350	4,09,774
Indirect charges	4,262	13,804		of	147	493
Total working ex- penses Profit	2,01,405 2,24,798	2,80,677 1,28,604				
Total	4,26,203	4,09,281	Net total receipts		4,26,203	4,09,281

FINANCIAL RESULTS.

109. The following is a statement of the receipts, working expenses, and net revenue of the canals for each of the last ten years:—

	1888-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99
1	2	3	4	5	6	7	8	. 9	10	11
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Navigation Miscellaneous	4,88,309 7,312	5,19,263 5,883	5,15,125 10,218	4,64,716 15,528	4,07,695 13,129	4,30,769 12,688	4,34,275 21,228	4,26,425 13,639	4,15,556 10,794	3,77,092 32,682
Total Less—Refunds of revenue	4,95,621 78	5,25,146 61	5,25,343 124	4,80,244 130	4,20,824 283	4,43,457 454	4,55,503 259	4,40,064 126	4,26,350 147	4,09,774 493
Net total receipts	4,95,548	5,25,085	5,25,219	4,80,114	4,20,541	4,43,003	4,55,244	4,39,938	4,26,203	4,09,281
WORKING EXPENSES.				90° 1° 10.00		de la sidirio				
DIRECT CHARGES.						*				
I Works, Maintenance, and Repairs.										
Works (extensions and improvements)	1,244 1,65,315	36,676 1,40,872	36,289 1,72,457	(—)28,498 1,65,223	53 1,64,943	1,766 1,64,876	13,239 1,68,477	49,059 1,31,656	1,324 1,38,537	2,828 1,45,135
Establishment, including direction and accounts Tools and plant	50,618 13,510	64,041 20,691	65,757 12,541	49,754 13,207	54,856 14,745	55,769 13,958	37,637 20,317	(-)20,940 28,001	(-)6,156 26,838	57,667 20,308
Total	2,30,687	2,71,280	2,87,044	1,99,686	2,34,597	2,36,369	2,39,670	1,87,776	1, 60,548	2,15,938
II.—Revenue Management.										
Navigation establishment	36,281	38,343	41,359	39,935	39,344	39,553	40,966	40,276	36,600	40,935
Total direct charges	2,66,968	3,09,623	3,28,403	2,39,621	2,73,941	2,75,922	2,80,636	2,28,052	1,97,143	2,66,873
Indirect charges.							12573		The second	
Capitalization of abatement of land revenue Leave and pension allowances	12,165	14,334	14,996	12,556	13,188	13,345	11,004	2,707	4,262	13,804
Total indirect charges	12,165	14,334	14,996	12,556	13,188	13,345	11,004	2,707	4,262	13,804
Total working expenses	2,79,133	3,23,957	3,43,399	2,52,177	2,87,129	2,89,267	2,91,640	2,30,759	2,01,405	2,80,677
Net revenue	2,16,410	2,01,128	1.81.820	2,27,937	1,33,412	1.53,736	63,604	2,09,179	2,24,798	1,28,604

Under extensions and improvements a diversion cut was made in the Bhil route between the Kumar and Madhumati rivers, and certain gauges were fixed in the Boytaghatta khal. The expenditure was Rs. 2,828 compared with Rs. 1,324 in the previous year.

The percentage of the net revenue on the capital outlay is shown below for ten years:—

ng mgapalang si Pro	CAPITAL OUTLAY (DIRECT AND INDIRECT)—		RECEIPTS	Percentage of			
Year.	During the year.	To end of the year.	Gross revenue.	Charges (direct and indirect).	Net revenue.	net revenue to capital outlay to end of year.	
1	2	3	4	5	6	7	
	Rs.	Rs.	Rs	Rs.	Rs.	1023 102 103 102 1	
1888-89	49,369	52,88,485	5,75,125	2,93,801	2,81,324	5.3	
1889-90	(-)281	52,88,204	4,95,543	2,79.135	2,16,410	4.1	
1890-91	5,693	52,93,897	5,25,085	3,23,957	2,01,128	3.8	
1891-92	(-)10,327	52,83,570	5,25,219	3,43,399	1,81,820	3.4	
1892-93	74,279	53,57,849	4,80,114	2,52,177	2,27,937	4.2	
1893-94	()403	53,57,446	4,20,541	2,87,129	1,33,412	2.2	
1894-95	1,076	53,58,522	4,43,003	2,89,267	1,53,736	2.8	
1895-96	1,27,831	54,86,353	4 55,244	2,91,649	1,63,604	2.9	
1896-97	4,68,975	59,55,328	4,39,938	2,30,759	2,09,179	3.5	
1897-98	4,39,638	63,94,966	4,26,203	2,01,405	2,24,798	3.6	
Average of previous		rejection of		ALC: NO			
five years	2,07,423	57,10,523	4,36,986	2,60,040	1,76,946	3.1	
1898-99	66,286	64,61,252	4,09,251	2,80,677	1,28,604	2.0	

The total receipts amounted to Rs. 4,09,281, as compared with Rs. 4,26,203 in the previous year, showing a decrease of Rs. 16,922. This falling-off was mainly attributable to the general dalness in trade and to the plague scare. The working expenses increased from Rs. 2,01,405 to Rs. 2,80,677. The increase chiefly took place in the maintenance and establishment charges of the year. The excess expenditure on maintenance was due to the heavy cost of silt clearance of Tolly's Nala and to the improvements carried out to the Angeria Creek in the steamer route. In the previous year the establishment charges, owing to an adjustment of account, were a minus quantity: in 1898-99 they were not only a positive charge, but, as there was very little expenditure on capital works during the year, the establishment charges were not divided between the capital and revenue as in the previous year. So that under establishment alone there was an increase of about Rs. 70,000. The net revenue of the year was Rs. 1,28,604 against Rs. 2,24,798, showing a decrease of Rs. 96,194. The result of the year's working was very disappointing. The number of steamers and flats which used the canals during the year was 194 against 274 in the preceding year. These figures are exclusive of the vessels which use the Sunderbans route; the number which passed through this route during the year was 2,672 against 2,497 in 1897-98 and 1,336 in 1896-97. The flats and steamers pay a nominal toll of Rs. 5 for each trip for using the route.

110. The lengths of channels open for navigation remained the same as last year, viz., 737 miles, as detailed below:—

LENGTHS OF

			Miles	Miles.
) Calcutta and New Cut Canal			 10
(2) Tolly's Nala, including 20 miles of Kaorapukhu	r khal		 37
(3) Eastern Canals Inner boat route Outer ditto		189	
``	Outer ditto		127	
				316
) Sunderbans steamer route			 350
(5) Bhil route between Kumar and Madhumati river	s conn	ecting	
	Khulna with Madaripur		Ĭ	 24
	Total Calcutta and Eastern Car	nals		 7 87

NAVIGATION.

The following statement shows the collections made during the year by the Collector and Supervisor of the Canals, and by the Executive Engineer, respectively:-

CANALS.	Num- ber of		COLLEC- TIONS BY EXECUTIVE ENGINEER.	GRAND					
	bo	Tolls from boats and rafts.	Demurrage.	Ferry tolls.	Tolls from steamers and flats.	Rents of buildings, fishery rent, and other mis- cellaneous receipts.	Total.	Rents of buildings, lands, and other mis- celianeous receipts.	TOTAL, GROSS REVENUE,
1	2	3	4	5	6	. 7	8	9	10
20.076 1.0 fc 16 shell	No.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Calcutta and Eastern Canals	65,030	2,81,636	2,962	3,995	18,360	5,660	3,07,613	h	
Tolly's Nala	48,356	71,785	1,036	1,003		277	74,101	28,060	
Total, 1898-99	113,386	3,53,421	3,998	4,998	13,360	5,937	3,81,714	28,060	4,09,774
Total, 1897-98	123,952	3,90,453	6,301	5,218	12,485	6,045	4,20,502	5,848	4,26,350

The total tolls from boats and rafts plying on these canals and Tolly's Nala amounted during the year to Rs. 3,53,421, against Rs. 3,90,453 of the

previous year, showing a decrease of Rs. 37,032.

The decrease on the Calcutta and Eastern Canals was Rs. 42,163. It was mainly due to the bad trade in jute and lime, and to the diversion of kerosine oil, coal and salt traffic to railways and flats. The plague scare had also some effect on the decrease.

On the Tolly's Nala there was an increase of Rs. 5,131, which was caused

by the better rice traffic during the year.

The large increase in the collection of miscellaneous receipts by Executive Engineer was to a large extent due to the sum of Rs. 20,000, being the amount of the results of the sale of the Balliaghatta godown to Messrs. George Henderson & Co., having been credited as receipts during the year.

The following are the principal articles of traffic on the Calcutta Canals and Tolly's Nala in 1898-99, the increase or decrease in collections and maundage

being shown against each :-

Articles.			+ or - in maunds.	+or- in collection.	REMARKS
	1		2	8	4
				Rs.	* 0
Rice Jute			+11,09,266	+20,147	
Firewood	***		-17,65,389 $-5,10,260$	-30,598 $-7,532$	
Spices	•••		+12,540	+102	
Empty boat Fish	•••			-1,634	
Salt	•••	•••	-14,610	-621	
Lime		****	-1,06,962	-3,538	
Coal	•••		-4,21,350	-6,076	
Kerosine oil	•••	***	-12,590	-1,077	
Passenger boat	•••	***	-1,33,913	-1,795	
- Box boxe		***	**************************************	-450	

During the year there was a general falling-off in all articles of traffic except in rice and spices. The decrease in jute traffic was due to the partial failure of jute crop which was an unusually bad one. The falling-off in empty boats was also due to the same cause.

In rice traffic there was an increase of Rs. 20,147. The increase took place principally at Dhappa and Chitpur toll stations where the trade was very active.

112. The table below classifies the boats which used the canals during the last two years:—

			NUMBER AND CLASS OF BOATS EXCLUSIVE OF RAFTS.								
YEAR, Canal,	Up to 100 maunds.	Between 100 and 1,000 maunds.	Between 1,000 and 2,500 maunds.	Between 2,500 and 5,000 maunds.	Over 5,000 maunds.	Total.					
1	2	3	/ 4	5	6	7	8				
1898-99	Calcutta and Eastern Canals. Tolly's Nala	23,607 19,013	35,405 11,435	4,805	1,063	81	64,96				
	Total, 1898-99	42,620	46,840	4,964			30,60				
1897-98	Calcutta and Eastern	20,771	45,518	5,633	1,063	81	95,56				
	Tolly's Nala	18,958	11,440	129		44	30,52				
	Total, 1897-98	89,"29	56,958	5,762	1,106	44	1,03,59				

There was a decrease of 8,031 in the total number of boats which entered the canals during the year as compared with the number in 1897-98, and in that year there was a decrease of 5,376 as compared with 1896-97

The number of small boats, or saltis, which entered Tolly's Nala from Kaorapukhur and paid tolls at Russa during the year was 17,716 against 20,244 in the previous year, showing a decrease of 2,528. The decrease was partly due to the shallow state of the Kaorapukhur khal and partly to the closure of Tolly's Nala for silt clearance. Including the saltis, the total number of boats was 113,284 against 123,843 in the previous year.

The number of steamers, launches, flats, and barges that entered the canals during the last five years is given below:—

1894-95	J	221	1897-98	274
1895-96	•••	312	1898-99	
1896-97	•••	349		194

There was a decrease of 80 vessels during the year compared with the previous year. The Superintending Engineer explains:—

"No flats now enter at Dhappa, which accounts for the decrease during the year in the number of vessels entering the Circular Canal. This class of traffic is being gradually replaced by cargo-boats and barges which are towed by steam-launches."

These figures are exclusive of the vessels that used the Sunderbans route and of the exempted vessels (155 in number), which mostly belonged to the Forest Department.

The number of steamers and flats that paid toll at the rate of Rs. 5 for using the Sunderbans route during the last five years is given below:—

1894-95 1895-96 1896-97		1,385 1,482 1,336	1897-98 1898-99		2,497 2,672
-------------------------------	--	-------------------------	--------------------	--	----------------

The large increase of 1,161 in 1897-98 and of 1,336 during the year, compared with the year 1896-97, was due to the opening of a new line of steamers by the India General Steam Navigation Company between Cachar and Calcutta. There would no doubt have been a further increase during the year had the jute crop been better.

The tonnage of boats, as determined by canal measurement, and the estimated weight and value of the cargo and the tolls realized are shown in the comparative statement below:—

YEAR.	Canal.	Number of boats, including passenger and empty boats, but excluding rafts.	Tonnage of boats by canal measure- ment.	Weight of cargo.	Value of cargo.	Tollage, including demurrage.	Percentage of toll on value of cargo.
1	2	3	4	5	6	7	8
1898-99{	Calcutta and Eastern Canals Tolly's Nala	No. 64,961 48,323	Tons. 691,866 241,295	Tons. 487,053 168,953	Rs. 3,91,87,559 99,08,996	Rs, 2,97,679 72,700	2003 I
	Total, 1898-99	113,284	933,161	656,006	4,90,96,555	3,70,379	0.75
1897-98 {	Calcutta and Eastern Canals Tolly's Nala	73,072 60,771	781,129 235,528	560,175 160,290	4,89,32,787 1,00,10,946	3,41,184 67,760	
	Total, 1897-98	123,843	1,016,657	720,465	5,89,43,733	4,08,944	0.69

There was a decrease of Rs. 98,47,178 in the value of cargo, due to the large decrease in weight of cargo carried.

113. The number of missing tickets in each of the last ten years is shown below:—

MISSING TICKETS.

YEAR.		No.	YEAR.			No.
1889-90		 238	1894 95		essil auch	170
1890-91		 212	1895-96		200	155
1891-92		 210	1896-97			86
1892-93	***	 169	1897-98			91
1893-94	***	 252	1898-99	•••		66

WRECKS.

114. In the Circular Canal 27 boats were wrecked during the year. Of these 25 were made over to their owners on payment of cost incurred, 1 was sold as unclaimed, and 1 sunk in deep water and could not be recovered. In Tolly's Nala 18 boats were wrecked, of which 17 were made over to their owners and 1 was sold. Of the 62 boats wrecked in the Eastern Canals, 36 were removed by their owners, 19 by the Public Works Department, the cost of removing being realized by recovery of salvage from owners by the sale of cargo, and 7 were destroyed by fire; 3 boats were arrested for plying without tickets, and 1 man was fined 8 annas by the Magistrate of Sealdah for committing nuisance on the canal banks.

CHECK MEA-SUREMENT OF BOATS. 115. During the year 15,527 boats were checked by the Supervisor, Calcutta Canals, and his subordinates. Of these 15,465 boats were found correctly measured, 41 under-measured, and 21 over-measured; Rs. 18-11 were realized on account of under-measurement and Rs. 13-7 refunded for over-measurement.

116. The following statement compares the cost of the revenue establishment for each of the last five years:—

REVENUE RSTABLISH. MENT.

PARTICULARS.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
1	2	3	4	5	6
	Rs.	Rs.	Rs.	Rs.	· Rs.
Salary and commission of Supervisor	COLD SERVICE SUBTRECEDED	10,481	8,971	4,121	9,037
Salary of Canal Inspectors Supervisor's office establishment	3.00 CSNS 1.52 C.5 55 65 600	5,367	5,283	5,160	5,160
Canal police	O OCH	6,847 2,046	7,191 2,146	7,742 2,288	8,269 2,102
Supervisor's steam-launch establishment	2,00,	2,010	2,140	2,200	2,102
Inspector's boat establishment	OOF	693	731	796	724
Dhappa water-boat establishment		167	165	192	177
Dafadars	828	829	872	923	859
Travelling allowances		151	19	52	22
Toll-collecting establishment		1,675	1,684	1,721	1,550
con-confecting establishment	12,232*	12,710*	13,214*	13,605*	13,035
Total cost of establishment	39,405	40,966	40,276	36,600	40,935

Includes salaries of darogas, clerks, cashiers, kootnavises, koyals, toll peons, and dinghi crews.

The increase or decrease in the expenditure is thus explained by the Superintending Engineer:—

"Under the head "Salary of Supervisor" there was an increase of Rs. 4,916, due to Mr. Cooksey having drawn the usual commission during the year, which his locum tenens did not get while the Supervisor was on furlough in the previous year. Although there was an increase of Rs. 527 in the Supervisor's office establishment, there was a corresponding decrease in the toll office establishment, owing to the transfer of a cashier from the latter office to the head office, in accordance with the orders of Government. In the police establishment there was a decrease of Rs. 186, due to the discontinuance of famine allowance. In the boat establishment there was a decrease of Rs. 151, due to the same reason."

117. The miscellaneous receipts during the year amounted to Rs. 32,682, against Rs. 10,794 in 1897-98, showing an increase of Rs. 21,888. This increase was due principally to the sale-proceeds (Rs. 20,000) of the Balliaghatta godown buildings being credited under this head, and partly to more rent having been realized from Mr. Cooksey for occupying the residence at Chitpur.

118. The state of the plantations for the last two years is shown below:—

MISCRLLA-

YEAR.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings below 4 feet.	Total.
1	2	3	4	5
1897-98 1898-99	No. 3,756 3,843	No. 874 825	No. 842 875	No. 5,472 5,543

The expenditure during the year was Rs. 757 against Rs. 679 in 1897-98. There were no receipts.

119. The statement below shows the distribution of the maintenance MAINTENANCE charges under the several sub-heads, as compared with the previous year:—

CANALS.	Locks.	Masonry bridges.	Roads.	Buildings.	Plantations.	Dredging.	Channel and bank.	Tow-path.	Rustic bridges.	Steam-launches,	Miscellaneous,	Drainage.	T'OTAL.
1	2	3	4	5	6	7	8	9	10	- 11	12	13	14
Alcutta Canais { 1898-99 1897-98 1898-99 1897-98 1898-99 1897-98 1898-99 1897-98 1898-99 1897-98 1898-99 1897-98 1898-99 1897-98 1898-99	Rs. 2,487 8,425 1,994 863	Rs. 2,663 3,751 1,446 3,512	Rs. 4,675 9,316 214 216	Rs. 1,394 2,035 61 387 2,533 2,033	Rs. 162 308	Rs. 24,319 19,714 4,289 1,066	Rs. 1,564 1,477 24,529 6,293 7,563 2,644 24,258	Rs. 1,022 1,638 371 559 6,538 8,682	Rs. 445 416 281 395 23,214 19,471	Rs. 4,186 4,526	Rs. 13,327 13,103 238 208 2,094 2,566 10,198 7,852	Rs. 89 96	Rs. 56,33 59,80 27,14 11,57 9,65 2,56 52,05 64,59
Total {1898-99 1897-98	4,481 4,288	4,109 7,263	4,889 9,532	3,988 4,455	757 679	28,608 20,780	36,300 32,028	7,931 10,879	23,940 20,282	4,186 4,526	25,857 23,729	89 96	1,45,1;

The maintenance charges show an increase of Rs. 6,598.

120. The work done by the dredgers and the cost, including that of delivering the mud, are shown below:—

	Quantity dredged.	Cost.	Rate per 1,000 cubic feet.
1	2	3	4
Steam dredger Victoria Fouracres' dredger Marchant's dredger Hydraulic dredger Clinker Bruce's dredger No. 3	C. ft, 1,313,400 741,600 54,310 758,160 411,480	Rs. 11,703 6,216 590 6,400 3,699	Rs. A. P. 8 14 6 8 6 1 10 13 9 8 7 0 8 15 9

The actual rates of dredging, excluding the cost of delivering the mud, and the cost of repairs, were as follows

> Rs. A. P. Steam dredger Victoria 3 7 107 Fouracres' dredger Marchant's dredger 2 15 5 2 4 3 3 13 0 Per 1,000 cubic feet. ... Hydraulie dredger Clinker ... Bruce's dredger No. 3 7 10 4

The total cost of work done during the year was Rs. 28,608 against Rs. 20,780 in the previous year, showing an increase of Rs. 7,828 The increase took place mainly in the working of the dredgers *Victoria* and *Clinker*, which had to be kept constantly employed in the Circular Canal for removing the silt which had accumulated in the previous year between the Chitpur lock entrance and the new cut canal. The result of the dredging operations was satisfactory. No complaints were made during the year of boats being detained at Chitpur for want of sufficient depth of water.

The average number of mud punts which worked daily with the Clinker was five, with the Victoria seven, with the Fouracres three, and with the Bruce three. In addition to these, six mud punts were received from the Sone Circle

during the year.

121. The expenditure on the Sunderbans steamer route, and the receipts from steamers and flats using it, are shown below for each of the last ten

· · · · · · · · · · · · · · · · · · ·	or many array 1	Ex			
Years.	Receipts.	On capital account.	On revenue account.	Total.	Net revenue
1	2	. 8	4	5	6,
1889-90 1890-91 1891-92 1892-93 1893-94 1894-95 1895-96 1896-97 1897-98 1898-99	Rs. 4,640 5,425 4.640 4,955 5,495 6,925 7,410 6,680 12,485 13,360	Rs	Rs. 2,094 2,268 1,920 2,094 2,094 2,094 3,893 3,462 2,566 9,657	Rs. 2,094 2,268 1,920 31,058 2,721 2,848 3,863 3,462 2,566 9,657	Rs 2,546 3,157 2,720 () 26,103 2,774 4,077 3,607 3,218 9,919 3,703
Total	72,015	30,345	32,052	62,397	9,618

There was an increase of Rs. 875 only in the receipts, while in the expenditure the increase was Rs. 7,091; consequently the net revenue was Rs. 3,703 against Rs. 9,919 in the previous year.

The increase in receipts was due to increased traffic on the line of daily steamers run by the India General Steam Navigation Company between Cachar and Calcutta and vice versa. There was no expenditure on capital account. The large outlay of Rs. 9,657 on revenue account was incurred in working the heave-up boat and for carrying out improvements in the Angeria Creek, on which alone Rs. 7,563 were expended, against an estimate for Rs. 17,043 which was sanctioned by Government.

During the year 1897-98 the Managing Agents of the India General Steam Navigation Company, Limited, and also the Rivers Steam Navigation Company, Limited, drew the attention of Government to the deteriorated condition of the Angeria Creek in the district of Backergunge. This creek had gradually silted up, and the navigation of steamers, during low water, was a matter of danger and difficulty. This creek forms the only connecting link between

STEAMER ROUTES

the Eastern and Western Sundarbands, and also, with the exception of the outer route, is the only convenient communication between Calcutta and the eastern river-borne traffic. The shelving bank of the creek was cut away by hand during the cold weather in the worst places for a width of 30 feet and to a depth of I foot below low-water level.

ORISSA COAST CANAL.

122. The capital and revenue accounts of this canal are given below: -1.—CAPITAL ACCOUNT.

HEADS OF ACCOUNT.	Outlay during 1898-99.	Outlay to end of 1898-99.
1	2	3 ,
Direct charges Less—Receipts on capital account	Rs. 14,838	Rs. 44,29,089 3,293
Total direct charges	14,838	44,25,796
Indirect charges	98	1,06,616

Under the capital account there was an expenditure of Rs. 3,095 (exclusive of tools and plant and establishment charges and suspense accounts) during the year on the works detailed below:-

(a) Construction of a circuit embankment round the inspection bungalow at Jamkunda in Range IVA of the canal to protect it from floods.

(b) Dredging in Ranges IVA, IVB, and V of the canal.

The expenditure incurred during the year on the embankment was Rs. 368 only, and that on the dredging was Rs. 2,727. The bungalow was completed in 1897-98, and the embankment during the year under review. The total outlay incurred on the bungalow was Rs. 4,597, and that on the embankment was Řs. 4,549.

2 .- REVENUE ACCOUNT-(Actuals).

REVENUE

	EXPEN	DITURE-		Receipts—		
Particulars.	During 1897-98.	Daring 1898-99.	Particulars.	During 1897-98.	During 1898-99.	
1	2	3	4	5	6	
DIRECT CHARGES.	Rs.	Rs.		Rs.	Rs.	
I.—Works, maintenance and repairs.	50,844	72,003	Water-rates			
1I.—Revenue manage- ment.	7,332	6,821	Navigation	84,294	72,954	
Total direct charges	58,176	78,824	Miscellaneous	2,431	2,082	
INDIRECT CHARGES	2,869	3,464	Total	86,725	75,036	
Total working expenses Net revenue	61,045 24,405	82,288 (—)9,194	Less—Refunds of revenue.	1,275	1,942	
Total	*85,450	73,094	Net total receipts	85,450	73,094	

123. The receipts on the Revenue account, and working expenses of the RESULTS. canal for the last ten years, are shown in the following statement :-

	1889-90	1890-91.	1891-92	. 1892-93.	1893-94	1894-95.	1895-96.	1896-97.	1897-98.	1898
1	2	3	4	5	6	7	8	9	10	
RECEIPTS. Water-rates	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	+
Navigation Miscellaneous	63,724 1,563	64,220					85,773 2,580	83,856 2,403	84,29 2,43	
Total Less—Refunds of re-	65,348 15		C C C C C C C C C C C C C C C C C C C		97,710 1,143		88,353 25	86,259 118	86,728 1,278	
Net total receipts WORKING EX-	65,333	65,586	62,057	64,934	96,567	65,940	88,328	86,141	85,450	71
PENSES. DIRECT CHARGES. I.—Works, Maintenance		6					*	Service of the servic		
and Repairs. Works (extensions and improvements).		5.4		-		195	645	•••		16
Repairs Establishment, including direction and accounts.	50,528 926	42,312 15,452			58,234 21,552		40,054 15,361	53,525 19,536	33,680 - 13,164	
Tools and plant	10,513	9,794	3,464	6,663	7,317	3,999	4,000	4,000	4,000	63
Total II.—Revenue Manage-	61,967	67,558	69,162	69,419	87,103	76,448	60,060	77,061	50,844	72,0
ment. Navigation establishment.	6,044	6,208	6,134	6,855	7,029	6,898	6,937	7,006	7,332	6,8
Total direct charges INDIRECT CHARGES.	68,011	73,760	75,296	76,275	94,132	83,346	66,997	84,087	58,176	78,8
Capitalized abatement of land revenue.		onoma;					Line Con	11-14 pil 1 22	3.4.7	
lowances.	975	3,032	3,253	3,377	4,001	3,725	3,122	3,716	2,869	3,4
Cotal indirect charges	975	3,032	3,253	3,377	4,001	3,725	3,122	3,716	2,869	3,4
Cotal working expenses	68,986	76,798	78,549	79,652	98,133	87,071	70,119	87,783	61,045	82,1
Net revenue	(-)3,653	(-)11,212	(-)16,492	()14,718	(-)1,566	(-)21,131	18,209	(-) 1,642	24,405	(-)9,1

in the state of the state of the last was less that the state of the s Under extensions and improvements the expenditure incurred during the year was Rs. 16,338 for the protection of the Nalcool lock by means of a rubble revertment along the left bank of the Burrabullong river, against the revised estimate sanctioned for the work amounting to Rs. 26,066. There was no expenditure under this head in the previous year. The total working expenses during the year was Rs. 82,288, against Rs. 61,045, or Rs. 21,243 more, while the receipts were Rs. 73,094, against Rs. 85,450, or Rs. 12,356 less, the net revenue being a deficit of Rs. 9,194, against a profit of Rs. 24,405.

124. The following table compares the traffic of the year with that of 124. The following table compares the traffic of the year with that of

1897-98:-

YEAR.	Number of boats *	Tonnage of boats.	Value of cargo, including rafts.	Toll.
1	2	3	4	5
C-308	No.	Tons.	Rs,	Rs.
1897-98 1898-99	19,373 15 993	203,069 167,345	47,83,562 32,72,462	84,294 72,954

There was a general decrease in all heads of the traffic. Regarding this falling-off, the Superintending Engineer writes :-

"The receipts from the Calcutta Steam Navigation Company were Rs. 12,213 against Rs 12,753 in the previous year. The decrease is trifling and calls for no remark. The tolls realized from the India General Steam Navigation Company were Rs. 6,769 against Rs. 4,069 in the previous year, while from Messrs. McNeill and Company no tolls were realized. The falling-off is due to the fact that steamers and boats no longer take rice from

Balascre to Chandbali.

"There was a slight increase in the number of passengers carried, but it is anticipated that with the opening of the Bengal-Nagpur Railway to Calcutta the passenger traffic will almost

"The tollage assessed on the Balliaghai drains, as compared with the previous year, is shown below:-

		선생님이 되면 전쟁이 얼마나 하는데 보다
The second secon	1898-99.	1897-98.
	Rs.	Rs.
Taken at Surpai on account of Orissa Coast Canal	2,731	3,321
On tickets taken in Hijili Tidal Canal, part due to Orissa Coast Canal	1,078	934
Total	3,809	4,255
		
Number of boats	1,684	1,821
Maundage	4,20,576	4,71,314

"The actual cash receipts at Surpai during the year were Rs. 5,292 (of which Rs. 2,980 were due to the Hijili Tidal Canal on through tickets), against Rs. 5,829 in the previous year.

"The falling off in traffic was partly caused by the plague scare in Calcutta, and partly owing to the silted condition of the Balliaghai drain, by which much of the traffic was diverted to the Orissa Coast Canal by the road to Jhareshwari. A dredger has been set to work in this drain, and it is hoped that next year's realizations will show an improve-

ment.

"The amount of local traffic compared with the through down traffic shows the proportion of rice going to Calcutta from the Balliaghai drain viā the Rassulpur river and the Hijili Tidal Canal and is 748 to 1,001, against 1,091 to 965 in 1897-98. Similarly, for boats to to Balliaghai, boats viā the river against those viā the Hijili Tidal Canal were 860 to 1,041, against 1,259 903 in the previous year."

"Table IID accompanying this report shows the details of goods carried by the Orissa Coast Canal during the year. The exports of rice and paddy fell off from 44,807 tons in 1897-98 to 28,862 tons during the year under review, and this heavy falling-off may be attributed partly to the plague scare and partly to the low price of rice prevailing in Calcutta market. There was, however, an increase in the export of jute, oil, spices, building materials, firewood, other food-grains, bamboos and miscellaneous goods, and a decrease in all other

items, as compared with 1897-98.

"The import trade of the Orissa Coast Canal did not show any marked improvement There was some increase in spices, tobacco, other food-grains, and miscelladuring the year. neous goods, but a considerable decrease is noticed in cotton, raw and manufactured, metals, oils, provisions, sugar, firewood, coke and coal. The fluctuations in other items need no

comment.

"The number of boats check-measured by officers and subordinates of the canal are shown in Statement No. 2 attached to this report: 203 boats were check-measured during the year, of which 185 were found to be correctly measured and 18 under-measured. Rupees 71-10-8 were realized from the manjis for boats under measured."

125. There was no Government transport service maintained on the canal. A bi-weekly service is run by the Calcutta Steam Navigation Company between Gewankhali and Nalcool in connection with the India General Steam Navigation Company's steamers between Balasore and Cuttack.

126. The length of the canal from Bhaitghur on the Rasalpur river to Charbatia on the Metai river remained the same as last year, viz., 1021 miles, including 51 miles of river-crossing: the whole length was open to traffic throughout the year.

127. The rainfall registered at Balasore was 53.32 inches compared with BAINFALL. 56.55 inches in 1897.98. The average of the previous five years was 70:47 inches. The rainfall at Charbatia and Bhograi was 55.05 and 63.40 inches,

against 54.20 and 51.55 inches respectively in the previous year. That at Contai was 55.62 inches against 61.38 in 1897-98.

128. The miscellaneous receipts are shown below:—

MISCELLA-NEOUS RECEIPTS.

1893-94	. 1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99.
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
2,477	1.937	2,580	2.403	2.431	2.366	2 082

PLANTATIONS.

129. The state of the plantations for the last two years is shown in the following statement:—

YEAR.		Trees upwards of 12 feet in height.	Saplings from 4 to 12 feet in height.	Seedlings below 12 feet.	Total.
		2	3	4	5
		No.	No.	No.	No.
1897-98 1898-99	:::	3,141 5,830	4,782 5,136	4,278 4,788	12,201 15,754

There was a total increase of 3,553 in the number of trees, saplings and seedlings during the year. The increase was due to new plantations and to more correct count made by the Executive Engineer.

FLOODS.

130. The highest flood levels, recorded on the various rivers crossed by the canal, are shown in the following table:—

NAME OF RIVER.		1897-98,		1898-99.		HIGHEST ON RECORD.			
	Locality.	Date.	Reading.	Date.	Reading.	Date.	Reading.	REMARKS.	
	3	3		8		7			
Subarnarekha Panchpara Burrabullong	Bhograi Panchpara Nalkul	17th August 1897 14th , ,	113.80 111.80 114.30	19th June 1898 17th September	117:90 112:20 115:70	June 1868 Not known 22nd September 1885.	118.00 118.00 151.20	Without date on Mr. Ver	
Mutai	Charbatia {	3rd August 1897 }	110.50	19th " "	110:40	Not known	116.20	Ditto ditto.	

There was one high flood in the Subornarekha river on the 18th June 1898, when the river rose 11 feet in 12 hours. The highest reading was 117.90 at midnight of the 19th. The high flood level was due to the obstruction caused by the embankment of the Bengal-Nagpur Railway running parallel to the Subarnarekha river for a distance of 10 miles. The Railway Company have since largely increased the water-way of their bridges, and it is anticipated that the next high flood will cause no obstruction. The flood did very little damage to the canal or to the flood embankments. There was only one breach 30 feet long, in Range IV in the 77th mile of the canal.

The highest monsoon levels in the various rages were as follows:-

1897-98.	1898-99.			
Range III.—Bhograi 110·50, 19th October 1897 " IVA.—Jamkunda 111·60, 19th " " IVB.—Nalkul 113·50, 18th " " VB.—Charbatia 113·60, 17th "	111.00, 14th October 1898 115.00, 19th June ,, 114.70, 15th September ,, 113.80, 12th October ,,			

131. The expenditure on maintenance and repairs, by main sub-heads, MAINTENANCE. for the year and for the five previous years, is shown below:—

Sub-heads,		1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99.
		2		4	5	6		
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Regulators	•••	1,115	910	4,061	132	149	1,273	85
River and hill-to works.	rrent	1,635	4,281	1,640	1,743	1,630	2,186	2,345
Bridges	•••	6,061	3,467	3,720	3,597	4,142	4,197	4,313
Escapes		7,999	2,320	229	22	419		
Navigation works		8,299	6,579	7,499	29,747	5,767	2,198 11,578	845 6,391
Buildings		6,148	3,167	4,057	6,058	4,474	4,781	4,179
Extra works		26,477	30,308	17,238	10,109	15,783	19,983	11,858
Tanks (reservoirs)					700		140	344
Miscellaneous		10.1.11						
Working steamers		500	1,516	1,610	1,417	1,316	1,272	347 1,803
Total		58,234	52,548	40,054	53,525	33,680	47,608	32,510

The cost of the repairs was considerably below the average.

132. The following table gives the results of the working of dredgers in the Orissa Coast Canal during the year:—

DREDGING AND SILT CLEARING,

Names of deedgers, hopper barges, and mud Punts	Cubic feet dredged.	Cost	OF-		Lifting	Removing rate per 1,000 cubic feet.	Total rate per 1,000 cubic feet.
		Lifting.	Removing.	Total.	rate per 1,000 cubic feet.		
1	2	3	4	5	6	7	8
· Dill are lake	nicos (1916-1917)	Rs.	Rs.	Rs.	Rs.	Rs.	
Dredger Bruce I (Comus).	324,250	1,358	1,460	2,818	4.18	4.50	Rs. 8-68
Dredger Marchant No. I.	65,340	546	294	840	8:36	4.20	12.86
Dredger Marchant No. II (Jack):	271,275	1,756	1,261	3,017	6:47	4.64	11.11
Dredger Marchant No. III (Sib- pur).	268,550	1,857	1,206	3,063	6.90	4.49	11:39
State Sections				jure e	\$100 E-120 E-120 E-1	hamana 13	
Total	929,415	5,517	4,221	9,738	5.93	4.54	10:47

The quantity of work done by each dredger in the Balasore Division during the year is shown in the following table:—

	N	UMBER	OF DAX	78.	et re-	cubic feet per working	TOTAL COST.				AVERAGE COST PER 1,000 CUBIC FEET.		
Name of dred- ger.	Working.	Under repairs.	On transit.	Idle, including Sundsys wher cleaned.	Total cubic feet moved.	Average cubic removed per w day.	Lifting.	Removing.	Total.	Lifting.	Removing.	Total.	
1	2	3	4	5	6	7	8	9	10	11	12	13	
Bruce I (Comus) "II (New) Marchant I "II (Jack) "II (Sib- pur).	128 203 170 166	199 110 108 159*	5 8 17 4	33 44 70 36 60	324,250 589,000 380,590 271,275 268,550	2,533 2,901 2,239 1,634	Rs. 1,358 2,071 2,055 1,756 1,857	Rs. 1,460 2,945 1,870 1,261 1,206	Rs, 2,818 5,016 3,925 3,017 3,063	4·19 8·51 5·40 6·47 6·91	4°50 5°00 4°91 4°64 4°49	8.66 8.51 10.31 11.11	
Total					1,833,665		9,097	8,742	17,839				

[•] This includes period occupied in transit to Dockyard.

The cost of repairs to each dredger and to 15 punts in the Balasore Division during the year was:—

are recommended to the second state of the				Rs.	Δ.	P.
Bruce No. I (Comus)				2,555	9	11
Do. No. II (New)	•••	•••	•••	1,808	5	8
Marchant No. I	Military Street			1,886	6	8
Ditto No. II (Jack)			•••	1,355	2	10
Ditto No. III (Sibpur)	•••			1,586	12	6
15 Mud punts		•••	•••	4,253	9	0
		Total		13,445	14	7

No silt clearance by hand labour was done either in the Orissa Coast Canal or the Balliaghai drain during the year.

SARAN CANALS.

CAPITAL

133. The project was completed in March 1886, and the Capital Account closed from the year 1886-87. During the year under review, Rs. 15,015 were expended, chargeable to—33 Famine Relief, Imperial, and Rs. (—)14 to 43—Minor Works and Navigation under Capital Account. The Revenue account is given below:—

REVENUE ACCOUNT - (Actuals).

REVENUE ACCOUNT.

	EXPEND	OITURE-		Receipts—			
Particulars.	During 1897-98.	During 1898-99.	Particulars.	During 1897-98.	During 1898.99.		
1	2	3	4	5	6		
DIRECT CHARGES.	Rs.	Rs.	Contract Con	Rs.	Rs.		
Maintenance and repairs	15,444	1,238*	Water-rates Navigation	3,198	4,318		
INDIRECT CHARGES	302	24	Miscellaneous	461	674		
Total working expenses Net revenue	15,746 (—)13,186	1,257	Total Less—Refunds of revenue.	3,662 1,102	4,992 Nil		
Total	2,560	4,992	Net total receipts	2,560	4,992		

^{*} Includes Rs. 654 charged to 33—Famine Relief Imperial.

134. The receipts on Revenue Account and working expenses of the FINANCIAL RESULTS. Saran Canals for the last ten years are shown in the following statement:-

		1889-90.	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
1		2	- 3	4	5	6	7	8	9	10	11
RECEIPTS.		100	Rs. 36,823 160	Rs. 15,785 46	Rs. 1,492 34	Rs. 6,764 50	Rs. 938 	Rs. 1,139 411	Rs. 53	Rs. 3,198	Rs. 4,318
Total se-Refunds of revenue		23,113	36,983	15,831	1,526	6,814 530	1,382 3,182	1,559 75	1,304 370	3,662 1 102	4,992 Nil
Net total receipts		23,113	36,983	15,831	1,526	6,284	(-) 1,800	1,475	934	2,560	4,992
WORKING EXPENSES. Direct charges.		24,900	26,454	D Oor						6.5	
ablishment	::	12,422 991	10,560 389	9,021 3,710 (—) 193	9,517 3,772 213	4,111 1,739 112	1,037 447 (-) 5	856	9,417 2,185 26	13,256 2,160 28	1,061 172
Total direct charges Indirect charges.		38,313	37,403	12,538	13,502	5,962	1,479	1,293	11,628	15,444	1,233
italization of abatement nd revenue we and pension allowances	of 	1,739	1,478	519	528	243	63	61	306	302	24
Total indirect charges		1,739	1,478	519	528	243	63	61	306	302	24
Total working expenses	***	40,052	38,881	13,057	14,030	6,205	1,542	1,354	11,934	15,746	1,257
Net revenue		() 16,939	() 1,898	2,774	(-) 12,504	79	() 3,342	121	() 11,000	() 13,186	3,735

135. The lengths of the canals and the areas commanded and irrigated hem are given in the following table:

1897-98.

Lengths of Canals open and areas commanded and irrigated Canals open areas commanded and irrigated Canals open and areas commanded and irrigated Canals open areas commanded and irrigated commanded areas commanded and irrigated canals open areas commanded and irrigated canals open areas commanded areas commanded and irrigated commanded and irrigated commanded areas commanded and irrigated commanded areas com by them are given in the following table:-

1934				1	1897-98.	740						18	98-99.			
Name of Canal.	Navigable canals,	Canals for irrigation only.	Distributaries.	Area protected from flood.	Area under command,	Area provided with dis- tributaries.	Area irrigated.	Percentage of area irrigated to area provided with distributaries.	Navigable canals.	Canals for irrigation only.	Distributaries.	Area protected from flood.	Area under command.	Area provided with distrib- utaries.	Area irrigated.	Percentage of area irrigated to area provided with distributaries.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Saran Canals. Main canal or head cut Branch Canals.		Miles. 6°34	1 .		Acres.		Acres.	a de la composição de l	(Miles:)		Acres.		Acres.	
I.—Daha feeder II.—Gandaki III.—Dhanai IV.—Gangri		3'34 1'57 1'00 6'57]		64,000		1,552			3:34 1:57 1:00 6:57	-		64,000			-
In addition to the above, the following are maintained:— I.—Thakraha Sota II.—Roopan Chap Sota		1°50 27°00	4		22	-				1.50 27.00	, , , ,					

The canals remained closed during the year.

136. The average rainfall on the area under command is shown by RAINFALE. seasons in the table below for the last five years:-

Kharif season (August, Se	n-	1894-95. Inches.	1895-96. Inches.	1896-97. Inches.	1897-98. Inches.	1898-99. Inches.
tember, and October) Rabi season (November	to	28.55	22.02	10.76	21.39	33.27
February) Total of year		2·62 51·28	0·50 43·42	0·99 28·94	0·76 51·17	1.27

The rainfall of the year was 55.93 inches, or 4.76 inches more than the previous year. It was more than the year 1896-97 by 26.99 inches. There was long and continued rain for three weeks in September, the total being 21.05 inches during the month, against an average of 7.95 inches 21.05 inches during the month, against an average of 7.85 inches.

137. The discharge of the river Gandak taken at Rewa and Siswa on the RIVER 8th and 18th March 1899 was 12,063 and 12,990 cubic feet per second, respectively.

IRRIGATION.

138. There was no irrigation done during the year as the canals were closed. The total area irrigated in 1897-98 was 1,552 acres.

The areas irrigated since 1881-82 are given below:—

	Year. Year.						
	1				2		
All Control of the Co		9441 - 1544 1441 - 1544 1441 - 1544	Acres.			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Acres.
1881-82 1882-83 1883-84 1884-85 1885-86 1886-87 1887-88 1888-89 1889-90			666 1,747 21,122 7,223 4,565 2,146 4,218 7,213 4,215	1890-91 1891-92 1892-93 1893-94 1894-95 1895-96 1896-97 1897-98 1898-99			2,226 5,965 3,560 1,568 Nil Nil 4,080 1,552 Nil

ASSESSMENTS
AND COLLECTIONS.

139. The assessments, remissions, and collections are shown below .-

YEAR.	Assessments.	Remitted or written off.	Collection to end of March 1899.	Balance to be collected.
1	2	3	4	5
	Rs.	Bs.	Rs.	Rs.
1896-97 1897-98 1898-99	6,416 3,828 Nil	232	} 7,544	2,468
Total	10,244	232	7,544	2,468

During the year there was no assessment of water-rates, as the canals were closed, but a great improvement was made in the collection of arrears. Out of Rs. 10,244 assessed for 1896-97 and 1897-98, Rs. 7,544 were collected and Rs. 232 remitted or written off, leaving a balance of Rs. 2,468 at the end of the year still to be collected.

MISCELLANE-OUS RECEIPTS. 140. The miscellaneous receipts were Rs. 674, against Rs. 464 in the previous year.

PLATATIONS.

141. The state of the plantations for the last two years is shown below:-

YEAR.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings below 4 feet.	Total.
1	2	3	4	5
1897-98 1898-99	No. 10,142 10,186	No. 5,767 5,750	No. 7,376 7,349	No. 28,285 23,285

The highest flood in the river Gandak occurred on 8th September, and reached 241.30 at Siswa. No damage was done to the cross bunds or sluices.

The heavy rain during the month of September caused local floods, but little or no damage was done.

The expenditure during the year was Rs. 60, against Rs. 60 and Rs. 77 in 1897-98 and 1896-97.

-98 and 1890-97.

143. The expenditure on maintenance and repairs during the past MAINTENANCE AND REPAIRS. five years is shown below:-

	Miles.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
1	2	8	4	5	6	7
		Rs.	Rs.	Rs.	Rs.	Rs.
Repairs to head cut and river protective works	6.34	432	459	392	304	231
Repairs to Daha feeder	3.34	166	1			
" to Gandaki feeder …	1.57	150	397	2,568	2,349	405
" to Dhanai feeder	1.00	119	í		2,020	
,, to Gangri feeder	6.57	170]			
" to dams and channels				1,493	324	
" to Sadowa channel	5.23				10,279	()229
Total		1,037	856	4,453	13,256	407
Establishment		447	437	2,185	2,160	172
Tools and plant (actual)		(-)5		26	28	
Refund of revenue	•••	3,182	75	370	1,102	18
GRAND TOTAL		4,661	1,368	7,034	16,546	579

The expenditure of Rs. 579 on maintenance during the year is exclusive of Rs. 654 expended on the Gandaki and Gangri feeders, and charged to 33-Famine Relief, Imperial. This amount was subsequently adjusted by the Examiner of Public Works Accounts, Bengal, against the Revenue Account, Saran Canals.

144. There is no dredging on these canals, as all silt is removed by hand.

DREDGING AND SILT CLEARING.

NADIA RIVERS.

145. The rivers comprised in this system are the Bhagirathi, Bhairab-Jalangi, Mathabhanga, and part of the Hooghly. The approximate lengths of the rivers shown below remained the same as last year:—

Bhagirathi Bhairab-Jalangi Mathabhanga

... 157 miles to Nadia.
... 1441 ditto.
... 137 miles to junction of the Hooghly river.
... 32 miles from Nadia to Chakdaha.

Hooghly

... 4701 miles. Total

146. No capital account of these rivers is kept. The revenue account for the last two years is given below:-

	EXPEN	DITURE—		Receipts-		
Particulars.	During 1897-98.	During 1898-99.	Particulars.	During 1897-98.	During 1898-99.	
1 ·	2	3	4	5	6	
DIPECT CHARGES.	Rs.	Rs.		Rs.	Rs.	
I.—Maintenance and repairs.	78,353	70,467	Navigation	88,555	89,279	
II.—Revenue manage- ment.	24,145	23,093	Miscellaneous	488	147	
Total direct charges	1,02,498	93,560	Total	89,043	89,426	
Indirect charges	6,361	5,862	Less—Refunds of	162 7776	10	
Total working expenses Net revenue	1,08,859 (—)19,816	99,422 (—)10,006	revenue.	67 65 a -		
Total	89,043	89,416	Net total receipts	89,043	89,416	

FINANCIAL RESULTS.

147. The receipts on revenue account and working expenses for the last ten years are shown in the following table:-

	1889-90.	1890-91,	1891-92,	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99
1	2	3	4,	. 5	6	7	8	9	10	11
RECEIPTS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Navigation Miscellaneous	1,85,983 60	2,00,508 136	1,92,718 247	1,65,380 158	1,71,166 86	1,41,419 279	*1,19,981 124		88,555 488	89,279 140
Less—Refunds of revenue	1,86,043 220	2,00,644 162	1,92,965 228	1,65,538	1,71,252	1,41,698	1,20,105		89,043	89,420
Total receipts	1,85,823	2,00,482	1,92,737	1,65,520	1,71,251	1,41,698	1,20,046	93,474	89,043	89,416
Working Expenses. Direct Charges.		Best I								
Maintenance and repairs, including extensions and improvements.	47,843	52,482	62,704	68,763	77,864	68,588	69,991	60,873	55,088	53,611
Establishment Cools and plant suspense accounts	38,537 2,250 () 1,036	45,410 2,476 3,169	45,838 1,830 (—)3,015	51,581 1,644 1,066	58,732 1,861 478	60,669 1,890 1,288	63,436 1,150 2,823	60,925 1,646 (—)1,155	45,433 2,462 (—)485	41,873 1,044 ()2,968
Total direct charges	87,594	1,03,537	1,06,857	1,23,054	1,38,435	1,32,385	1,87,400	1,22,289	1,02,498	93,560
Indirect Charges.					99.1		1			
eave and pension allowances	5,895	6,357	6,417	7,221	8,222	8,494	8,881	8,529	6,361	5,862
Total indirect charges	5,395	6,357	6,417	7,221	8,222	8,494	8,881	8,529	6,361	5,862
Total working expenses	92,989	1,09,894	1,13,274	1,30,275	1,46,657	1,40,879	1,46,281	1,30,818	1,08,859	99,422
Net revenue	92,834	90,588	79,463	35,245	24,594	819	(-)26,235 (-)37,344 (-	-)19.816 (-	-)10.006

RAINFALL. IRRIGATION.

The financial result is a slight improvement over that of the previous year.

148. No rainfall register is kept up for these rivers.
149. There is no regular irrigation from the Nadia rivers. During the flood season water was supplied, as usual, through the embankment sluice between Lalbagh and Plassey for the irrigation of the rice crop.

150. The several classes of boats which plied on the rivers and the tolls NAVIGATION.

			NUMBER	AND C	LASS OF	BOATS.			Collections by Toli Collectors.				pq	
NAME OF RIVER.	Up to 100 maunds.	Between 100 and 1,000 maunds.	Between 1,000 and 2,500 maunds,	Between 2,500 and 5,000.	Over 5,000 maunds.	Total.	Number of rafts.	Number of steamers and flats,	Tolls from boats,	Tolls from rafts.	Tolls from steamers and flats.	Total tells.	Miscellaneous re-	Total collections.
1.	2	3	4	5	6	7	8	9	10	11	12	13	14	15
tagirathi (Jangipur toll- station). hagirathi and Bhyrub- Jalangi (Sarugganj toll- station).	No. 6,138 12,599	No. 1,703 10,066	No. 408 533	No. 109 73	No. 11 13	No. 8,369* 23,284	No. 26 244	No. 195 214	Rs. 15,362 42,189	Rs. 91 433	Rs. 4,710 2,769	Rs. 20,163	Rs.	Rs.
thabhangal and Ichamati Hanskhali toll-station).	5,112	5,858	363	36		11,369		2	23,721		1	23,725	\[\]	••
Total, 1898-99	23,849	17,627	1,304	218	24	43,022	270	411	81,275	524	7,480	89,279	147	90.40
Total, 1897-98	23,339	18,790	1,134	198	/ 15	43,476	216	340	84,199	475	3,881	88,555	488	89,42

^{*} Inclusive of empty and passenger boats.

The total realizations of the year showed an increase of Rs. 383 compared with the previous year, in spite of the falling-off both in the number of vessels and collections of tolls at the Sarupganj toll-station. There would probably have been a considerable increase of revenue had not the plague scare of Calcutta interfered with the traffic; the Superintending Engineer reports that boats passing down the rivers actually paid toll to go back again when the boatmen heard of the plague in Calcutta. The reduction in prices during the first six months of the year, combined with the unfavourable state of the Bhagirathi river, also affected the traffic to some extent. The number of steamers using the rivers increased from 284 in the previous year to 314 in 1898-99. The flats increased from 56 to 97. The increase was due to the fact that the steamer companies again commenced to run steamers in the Bhagirathi and Jalangi rivers.

151. The following is a statement of the number of boats, their tonnage, the weight and value of their cargo, and the toll collection:—

TRAFFIC

Name of River	Number of boats, steamers and flats (exclu- sive of rafts).	Tonnage of boats by canal measure- ment.	Weight of cargo.	Value of cargo (exclusive of rafts).	Toll*	Percentage of toll on value of cargo.
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	2	3	4	5	6	7
Bhagirathi	No.	Tons.	Tons.	Rs.	Rs.	Mr. F
Ditto and Bhyrub Jalangi Mathabhanga and Ichamati	8,564 23,498 11,371	101,725 468,532 116,726	45,788 69,177 41,177	32,91,545 88,76,858 41,98,469	20,066 44,947 23,725	
Total, 1898-99	43,433	686,283	156,143	1,63,66,872	88,738	0.54
Total, 1897-98	43,816	475,391	146,087	1,66,80,608	88,080	0.52

Tolls from boats, steamers and flats (exclusive of rafts).

There was a slight increase in the weight of cargo, but if a series of years is examined, it will be found that there is a marked decrease in the goods passing along these rivers.

The Superintending Engineer remarks:-

[&]quot;The falling-off in traffic and collections at Sarupganj, as shown by the above figures, occurred entirely in the Jalangi river and is said to be owing partly to the plague seare and partly to the growing apprehension prevailing among the country boatmen as to the difficulty of navigating this river both at the entrance and at certain intermediate shoals.

It is, however, satisfactory to note that this falling-off at Sarupganj was more than sufficiently compensated for by the increase noticeable at both the Jangipur and Hanskhali toll-stations. The total weight of cargo registered during the year under report was 156,142 tons against 146,087 tons in the previous year. The toll collections rose slightly from Rs. 88,080 in 1897-98 to Rs. 88,738 in 1898-99."

It is often supposed that the decreasing traffic on these rivers is due to their deterioration, but it is at least doubtful if this opinion is correct. The plan which accompanies this note shows the Bhagirathi entrance; concerning this the Superintending Engineer writes:-

"The Executive Engineer reports that "the entrance was practically the same as last year, but with a velocity a good deal less than usual, due probably (apart from the fact of the formation of a shelving bank in front, which caused the main current of the Pudda to flow more in mid-stream, thereby reducing the indraught to the Bhagirati) to the heavy local rainfall during the middle of October, which kept the Bhagirathi up, while the Ganges was falling rapidly, and so rendered the current at the mouth still more sluggish."

On the tracing which accompanies this report is marked roughly the position of the head of the Bhagirathi from 1822 up to date.

Training works at the entrance were started on the 21st October, with a bed level of 56:20 and a minimum depth of 7 feet, and eventually a channel was scoured down to 47:40 by the 16th November, but unfortunately it began silting up outside the training works, and although these were extended out into the Pudda, they failed to be of any practical good, as the velocity was too small. The entrance, though it did not actually run dry even in May 1899, was practically closed for through traffic from the beginning of January 1899, when

the depth was only 18 inches.

The number of shoals trained was 61, against 63 in the previous year. The training works done in this river between its entrance and Nadia extended over a length of 154,772 lineal feet, against 177,495 feet in the previous year.

STEAMER SERVICE.

152. No transport service was maintained by Government on these rivers during the year. The steamer service kept by the several companies is shown in the statement below:-

NATURE OF	TERMINAL	STATION.	Outward and	Period.
Service.	From—	То	inward.	Feriod.
1	1 2		4	5
		Calcutta Steam	n Navigation (Company, Limited.
Twice a week	Calcutta	Jiaganj	Both	From 2nd July to 1st December 1898.
Ditto	Do	Katwa	Do	From 27th June 1898 to 10th
Ditto	Azimganj	Jangipur and	Do	January 1899. From 6th July to 12th November 1898.
Thrice daily	Azimganj Berhampore	Azimganj	Do	From 24th June to 29th
	Lalbagh		Part Charles of the Control of the C	November 1898. All the year round.
early seed marking	e destablished in Education Appears	East In	ndian Railway	Company.
Occasional	Rajmahal	Jangipur	Both	From 21st July to 5th October 1898.
		India Genera	ıl Steam Navig	ation Company.
Occasional	North-Western Provinces.	Calcutta	Both	From 28th July to 2nd September 1898.
		Rivers St	eam Navigatio	n Company.
Occasional	North-Western Provinces.	Calcutta	Both	From 11th August to 5th September 1898.

SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899. 2125

The cost of the revenue establishment for the last five years is REVENUE 153. shown below:-

	1893-94	1894-95.	1885-96.	1896-97.	1897-98.	Average of previous five years.	1898-99.
1	2	. 8	. 4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs	Rs.
Salary and commission of Collectors.	12,644	14,807	14,010	14,338	13,827	13,925	13,762
Cost of office establishment.	3,901	8,494	8,407	8,820	9,169	8,758	8,514
Travelling allowance	525 947	766 395	756 409	793 422	726 423	713 519	390 427
Total	23,017	24,462	23,582	24,373	24,145	23,915	23,093

There was a decrease of Rs. 1,052 compared with the previous year. The decrease took place in the toll stations at Jangipur and Sarupganj.

154. The miscellaneous receipts during the year amounted to Rs. 147 MISCELLANE-OUS RECEIPTS.

against Rs. 488 in the previous year.

155. The only plantations in connection with the Nadia rivers are those Plantations on the berms of the Bhagirathi embankment (Schedule D, No. 94). The number of trees during the year compared with the previous year is shown in the following statement:-

YEAR.	Trees over 12 feet.	Saplings from 4 to 12 feet.	Seedlings below 4 feet.	Total.
1	2	3	4	5
1897-98 * 1898-99	No. 18,401 22,311	No. 3,496 3,109	No. 736 1,343	No. 22,633 26,763

The increase during the year is due to bamboo having been shown in

numbers and not by clumps, as was done last year.

156. There was a very high flood in the Bhagirathi river during the year.

The highest reading of the Berhampore gauge was 29.72 feet on the 24th September 1898. The flood was the highest since 1894, but it was lower than the highest recorded flood of 1890 by 1 foot 2\frac{3}{4} inches. The peculiar features of the flood were its long duration, the lateness of its maximum rise and its of the flood were its long duration, the lateness of its maximum rise, and its exceedingly rapid fall. The gauge readings at Gheria and Berhampore for the last ten years are given below:-

YEAR.				Berhampore.	Gheria.
1889			•••	30.37	34.00
1890	•••			30.96	34.70
1891				26.58	29.30
1892	•••	•••	•••	29.12	31.55
1893 1894	•••	•••	•••	27.96	30.75
1895	***	•••	•••	30.30	22.75
1896			***	26·12 25·33	28.80
1897				27.25	28.50
1898		A CONTRACTOR		29.72	30.00

The highest flood levels of 1898-99 of the Bhagirathi, Jalangi and Mathabhanga rivers at Berhampore, Surupganj and Hanskhali are compared below with the highest levels in the previous year, and with the highest levels on record. The readings given are the heights above mean sea level:—

		1897-98.		1898-99.		HIGHEST KNOWN.	
RIVER.	Locality.	Date.	Gauge Read- ing.	Date.	Gauge Read- ing.	Date.	Gauge Read- ing.
1	2	8	4	5	6	7	8
Bhagirathi Jalangi Mathabhanga	Berhampore Sarupganj Hanskhali	29th August 1897 2nd September 1897 31st August 1897	27°25 27°35 20°92	24th September 1898 24th ,, ,,	29.72 31.80 25.96	15th August 1890 28th 3rd September 1890	30°96 34°88 30°93

MAINTENANCE AND REPAIRS. 157. The charges for maintenance and repairs (exclusive of establishment and tools and plant) are detailed below:—

PARTICULARS.	1893-94,	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99
1 - Company and Alexander	2	3	4	5 .	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs,	Rs.	Rs.
Re-opening lower entrance channel, Bhagi- rathi river.	546		70			109	
raining works in river Bhagirathi Bhyrub Bhyrub Jalangi Mathabhanga Mathabhanga Mathabhanga Intaining and working divisional boats betty and other charges	51,481 4,318 6,430 2,960 6,500 2,635 3,394	41,642 3,989 7,034 2,717 6,535 2,493 4,178	45,694 6,107 6,932 844 5,731 2,297 2,386	36,602 5,540 5,549 1,739 6,059 2,876 2,508	28,334 5,000 6,668 1,776 5,829 2,832 4,419	40,750 4,991 6,523 1,827 6,131 2,627 3,377	25,43 4,88 7,15 2,11 6,08 2,39 5,55
Total	77,364	68,588	69,991	60,873	54,858*	66,335	53,61

^{*} Exclusive of land charges amounting to Rs. 230.

The total expenditure incurred on the maintenance of the Nadia rivers, inclusive of charges for extensions and improvements of lands and establishment and tools and plant, but exclusive of indirect charges, was Rs. 93,560, as compared with Rs. 1,02,498 of the previous year, thus showing a decrease of Rs. 8,938. The reduction in the Public Works establishment charges from Rs. 21,288 to Rs. 18,780 was caused by the apportionment of a considerable portion of these charges to works and repairs under "Agricultural and Provincial" respectively.

Of the total expenditure of Rs. 93,560 on maintenance and repairs, Rs. 48,059 were spent on training works, Rs. 5,552 on other works, Rs. 18,780 and Rs. 23,093 on Public Works and Navigation establishment charges, respectively, Rs. 1,044 on tools and plant, and Rs. (—)2,968 on suspense account.

tively, Rs. 1,044 on tools and plant, and Rs. (—)2,968 on suspense accounts.

158. No work was done under this head except at a few shoals, where sand was cleared by hand, in order to keep up a running stream of good drinking-water for the towns and villages along the river banks.

159. The wrecked boats removed from the beds of the rivers during the year were 17 besides 179 trees and 45 bamboo clumps. Several trees were also cut down and removed from the cutting banks to prevent their falling into the rivers and endangering the safety of the navigable channels. The banks were, as usual, marked with sign poles to indicate the deep water channels.

GAIGHATA AND BUXI KHAL.

LENGTH OF KHAL. MAINTE-

DREDGING AND SILT CLEARING.

WRECKS.

160. The length of this khal is 7½ miles.

161. The cost of maintaining it during the year under review, exclusive of refunds of revenue was Rs. 395, against Rs. 681 in the previous year. The right of collecting tolls has been leased for five years, commencing from the year 1896-97, at an annual rental of Rs. 4,500. The lessees have paid the full amount for the year under review.

EDEN CANAL.

partly in the Hooghly district, its supply of water being obtained from the Damodar. No Capital or Revenue Account is maintained. The aggregate length of the canal and its excavated channels including the two distributaries which were completed in 1897-98 was 451 miles, as detailed below:-

ment that can be and with the control of the contro	Miles.	Feet.
Joojooty sluice and channel, Nos. 1 and 2	2	0
Eden Canal proper	191	0
Kana Damodar junction cut	$2\frac{1}{9}$	0
Saraswati junction cut	21	0
Connecting channel between the Rankini Doho and the Kana Damodar	10	0
Connecting channel between the Rankini Doho		
and Kana Nadi	1	0
Distributary No. 1	7	4,720
Ditto No. 2	9	4,055
and the second control of the second	451	20****
	-	

Besides the above, the natural channels of the Kana Nadi, Kana Damodar, Banka Nala, and North Saraswati are included in the system.

The gross area commanded by the Eden canal is about 300,000 acres, of

which about 200,000 acres are culturable and 100,000 acres irrigable.

163. Revenue accounts are not kept of this Canal: the receipts and expen-

diture for 1898-99 and the five previous years are given below:-

	•	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	Average of previous five years.	1898-99.
11	-	2	8	4	5	6	7	8
Receipts.	-	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
sollonoona		35,943 620	29,674 576	30,763 355	36,775 316	35,789 453	33,789 464	28,333 592
Total .		36,563	30,250	31,118	37,091	36,242	34,253	28,925
MATTON 33 O	of	654	50	201	556	407	374	200
et total receipts .		35,909	30,200	30,917	36,535	35,835	33,879	28,725
Working expenses.		This of the co			Milk Salid	a alland		
aintenance and repair tablishment	rs 	515 35,619 13,474 732	12,554 25,303 14,129 752	3,072 37,341 14,951 606	51,385 28,039 28,625 408	32,294 16,930 17,537 276	19,964 28,646 17,743 555	8,102 21,386 9,495 397
Cotal expenditure .]	50,340	52,738	55,970	1,08,457	67,037	66,908	39,380
Net revenue .		(-)14,431	()22,538	()25,053	(-)71,922	(-)31,202	(-)33,029	()10,655

The outlay on account of original works during the year was Rs. 8,102 only; the expenditure was confined to the payment of the cost of land acquired for the distributaries constructed in 1897-98. The receipts during the year were Rs. 7,110 less than in the previous year. The decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collection and reduced the decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collection and reduced the decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collection and reduced the decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collection and reduced the decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collection and reduced the decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collection and reduced the decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collections and the decrease was due to the heavy rainfall throughout the cultivating season which retarded the work of collections and the decrease was due to the heavy rainfall throughout the decrease was due to the heavy rainfall throughout the decrease was due to the heavy rainfall throughout the decrease was due to the heavy rainfall throughout the decrease was due to the decrease was due to the heavy rainfall throughout the decrease was due to the decrease was due t tion and reduced the demand for canal-water for irrigation purposes. There was an increase of Rs. 4,456 on maintenance and repairs. It was due to several minor works of improvement having been carried out during the year. The total expenditure of the year was Rs. 39,380 against Rs. 67,037, and the net revenue was a deficit of Rs. 10,655 only against a deficit of Rs. 31,202

in the previous year. The result of the year's operations was, on the whole, fairly satisfactory. The revenue was below the average of the previous five years but the expenditure also was considerably less. The canal was maintained in an efficient condition during the year.

164. The rainfall registered at Edilpur in the Burdwan district was 72.14 inches, as compared with 62.88 in 1897-98, the fall during the kharif season

being 48.52 inches, or 4.71 more than that of the previous year. CROP EXPERI-MENTS.

165. Regarding crop experiments, the Superintending Engineer writes:-

"Nineteen crop experiments were made with paddy crops by subordinates, of which ten were made on irrigated lands and nine on unirrigated lands. These experiments showed that the average outturn of an acre of middle class land irrigated by canal-water was 33 maunds 5 seers of paddy and 37 maunds and 7 seers of straw weighed dry, while the average outturn of an acre of similar land which did not receive the benefit of canal-water was 20 maunds 1 seer of paddy and 25 maunds 28 seers of straw.

The results of the experiments seem unreliable, as the average yield of paddy in the

The results of the experiments seem unreliable, as the average yield of paddy in the Midnapore and Orissa canals is 17 maunds 14 seers and 24 maunds 28 seers, respectively. The Execuitve Engineer will be directed to supervise the experiments next year."

The Chief Engineer quite agrees with the Superintending Engineer in thinking that these results cannot be accepted, and that the Executive Engineer should check the experiments next year.

The total area leased was 26,918 acres, as compared with 23,615 166. acres in 1897-98, showing an increase of 3,303 acres. The increase was due to the execution of some new leases on the banks of the Ilsura khal and the Ghea, Dhoosi, and Kana Nadis in the Hooghly district.

In addition to the areas leased permits were issued for 2,318 acres for single watering from the Kana Damodar beyond the area commanded by the

The total area irrigated during the year was 29,757 acres, consisting of 19,938 acres of *kharif* and 441 acres of *rabi* in the Burdwan district, and 9,080 acres of *kharif* and 298 acres of *rabi* in the Hooghly district, as compared with 24,487 acres in the previous year, viz., 17,557 acres of kharif and 520 acres of rabi in the former and 6,083 acres of kharif and 327 acres of rabi in the latter district. Out of the total area of 739 acres of rabi irrigated during the year, 143 acres were sugarcane.

The increase in the area under kharif irrigation was mainly due to the

construction of the distributaries.

The decrease in rabi irrigation in both the Burdwan and Hooghly districts was due to the ample rainfall throughout the kharif season, especially in September and October 1898 which reduced the demand for canal-water.

There was only one case of surreptitious irrigation during the year. Thirty-six acres were irrigated without a permit in the Hooghly district. The area was assessed at the rate of Re. 1 per bigha.

The following statement shows the area irrigated during the last five years :-

YBAR.	Long lease.	Season lease	One flushing beyond area commanded.	Unauthorized irrigation.	Total.	
1	, 2	8	4	5		
1893-94 1894-95 1895-96 1896-97 1897-98	Acres. 11,601 19,650 30,195 16,580 21,850	Acres. 138 20 1,984 2,362 1,459	Acres. 720 3,884 2,352 1,178	Acres 158	Acres. 11,739 20,390 36,221 21,294 24,487	
Average of previous five years	19,975 24,959	1,193 2,444	1,627 2,318	31 36	22,826 29,757	

There was an increase of 5,270 acres in the total area irrigated during the year, as compared with the previous year, and an increase of nearly 30

AREAS LEASED AND IRRIGAT-ED.

DUTY OF

per cent. as compared with the average of the previous five years. The result was satisfactory, considering that the rainfall of the year was both plentiful and evenly distributed.

167. The duty per cubic foot of discharge utilized during the kharif season was 145.95 acres. But this duty is unreliable, as, owing to the heavy rainfall throughout the season, there was little demand for canal-water. The correct duty of water in the rabi season could not be given as the discharge of water utilized was partly used for filling tanks for domestic purposes, &c.

168. The water-rates assessed during the year amounted to Rs. 33,876, as compared with Rs. 29,825 in 1897-98, and adding the unrealized balance (Rs. 17,304) of the six previous years, the gross demand for the year was Rs. 51,180, against Rs. 56,343 of the preceding year. Deducting Rs. 2,857 on account of commissions paid on advance payment, and remissions amounting to Rs. 522, the net assessment of the year was Rs. 47,801.

The collections of the year amounted to Rs. 28,239.* This sum includes

* The Examiner has shown in his Finance Accounts for 1898-99 Rs. 28,333. The difference Rs. 94 has been shown by the Executive Engineer as miscellaneous receipts.

Rs. 249 on account of stamp fee and interest which were realized by the certificate officers of Burdwan and Hooghly, and Rs. 200 which were refunded to the lessees for non-irrigation of water to their tanks. The net collection, therefore, was

Rs. 27,790. The unrealized balance at the close of the year was Rs. 20,011 against Rs. 17,304 in the previous year. Deducting Rs. 10,699, which were subsequently written off as irrecoverable under Bengal Government orders No. 4T.I.A, dated 13th May 1899, the net balance was Rs. 9,312. The arrears are far larger than they should be, and the Superintending Engineer will be specially addressed on the subject.

The revised water-rate rules for the Eden Canal were framed in March 1898 on the lines of the revised rules for the Midnapore Canal, with the object of removing the inconveniences and difficulties in granting remissions, in filling tanks with canal-water for domestic use, and in supplying water for manufacturing and other purposes. They were passed by the Lieutenant-Governor on the 22nd August 1898, and published in the Calcutta Gazette of the 24th idem.

169. The cost of the temporary revenue establishment employed during the year for the supervision and management of irrigation was Rs. 4,338 against Rs. 4,578 in the previous year, showing a decrease of Rs. 240.

The miscellaneous receipts amounted to Rs. 686 inclusive of Rs. 94 shown by Examiner as water-rate receipts, against Rs. 453 in 1897-98.

171. There was no expenditure on plantations during the year.

Nine trees above 12 feet in height and thirteen saplings died within the year, reducing the total number of trees from 300 to 278.

172. There were six floods in the Damodar river during the year. maximum reading of the floods of the 19th June and 15th September were 16 feet 6 inches or only 4 inches lower than the previous highest known flood at Edilpur. No damage was done to the canal.

MISCELLA-NEOUS RECEIPTS.

MADHUBAN CANAL.

The length of this canal is $6\frac{1}{4}$ miles in the Champaran district. LENGTH OF The expenditure incurred on its maintenance during the last five EXPENDITURE. years is shown below:-

PARTICULARS.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
1	2	3	4	5	6
Works Maintenance Establishment Tools and plant Refunds of revenue	Rs. 5,567 2,405 36 27	Rs. 2,488 1,269 7 44	Rs. 3,859 1,861 71	Rs. 4,210 2,229 32	Rs. 34* 6,882 2,610 43
Total	8,035	3,808	5,791	6,471	9,569

^{*} This relates to the expenditure on the Tribeni and Dhaka Canals. It has been erroneously shown by Examiner against Madhuban Canal. The amount will be written back in his next year's accounts.

The expenditure during the year was Rs. 3,064 more than last year. The increase was due to the cost of repairing the damage caused by the flood of September to the Teur weir approaches, the embankment on the east up-stream

side of the weir, and the canal banks.

175. The rainfall during the year was 74.60 inches, against 59.40 inches

in the previous year.

176. No revenue is derived from irrigation on this canal, as water-rates are not recovered. The miscellaneous receipts during the year were Rs. 120,

against Rs. 214 in 1897-98.

177. The total area irrigated during the year was 3,190 acres, as compared with 2,000 acres in the previous year. The increase of 1,190 acres was pared with 2,000 acres in the previous year. due to the great demand for water from the middle of October to end

The areas of the different crops irrigated during the last five years were as follows:-

NATURE OF CROP.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99
1	2	3	4	5	6
	Acres.	Acres.	Acres.	Acres.	Acres.
Bhadoi				482	254
Kharif	5,033	980	5,873	958	2,010
Rabi	117	112	1,905	174	
Рорру	322	783	2,342	386	926
Hot-weather crops	. 46	379	1,131	rgestari • o n el	in Mary 101
Total	5,518	2,254	11,251	2,000	3,190

178. The state of the plantations for the last two years is shown PLANTATIONS, below:-

YEAR.	Trees over 12 feet.	Saplings between 4 and 12 feet.	Seed- lings under 4 feet.	Total
1	2	3	4	5
	No.	No.	No.	No.
1897-98	245	242	230	717
1898-99	245	250	218	713

REVENUE.

RAINFALL.

IRRIGATION.

GENERAL RESULTS.

179. The net results of the year 1898-99, compared with those of the NET REVENUE. previous quinquennial period, are shown below:-

Particulars.	Receipts from all sources.	Working expenses, including refunds of revenue (direct and indirect charges).	Profit or loss
1	2	3	4
Major Irrigation Works.	Rs.	Rs.	Rs.
Average of five years ending March 1898.	17,62,234	14,47,169	+3,15,065
1898-99	18,53,877	14,41,402	+4,12,475
MINOR WORKS AND NAVIGATION.			
For which Capital and Revenue accounts are kept.	rainst a sec	ř.	
Average of five years ending March 1898.	5,25,197	3,50,062	+1,75,135
1898-99	4,89,802	3,66,657	+1,23,145
For which only Revenue accounts are kept.			
Average of five years ending March 1898.	1,26,107	1,43,346	()17,239
1898-99	93,926	99,863	(-) 5,937
For which neither Capital nor Revenue accounts are kept.	5		
Average of five years ending March 1898.	34,377	73,779	(-)39,402
1898-99	29,045	49,149*	(-)20,104
Total { Average of five years ending March 1898. 1898-99	24,47,915 24,66,650	20,14,356	+4,33,559 +5,09,579

[•] Exclusive of Rs. 18,288 expended on the Tribeni Canal and survey of Brahmaputra river.

Compared with the revised estimates of receipts and expenditure (direct charges) for 1898-99, the total actual receipts, show an increase of Rs. 15,650 and the expenditure, a decrease of Rs. 96,609.

180. Reckoned on earnings, that is, on assessed revenue, as opposed to actual receipts, the net results of the Major Irrigation Works for the last two years were as follows:—

YEAR.		Earnings.	Working expenses.	Profit or loss.
		Rs.	Rs.	Rs.
1897-98		19,20,025	14,55,076	(+) 4,64,949
1898-99	•••	18,61,673	14,41,402	(+) 4,20,271

ARREARS.

181. The work done during the year in the recovery of water-rates was particularly good. On the Orissa and Sone Canals there were no arrears at all, and the result may be regarded as highly satisfactory. There was an increase in the arrears on the Midnapore Canal from Rs. 3,518 to Rs. 5,718. This was due to the villagers in the Antra subdivision having declined to pay up their rates, as they expected that remissions would be granted to the villages in which the rice crop had suffered considerable damage.

The figures for the three canal systems are given below:-

Seq.	Canals.	Outstanding on 1st April 1898.	Demand of 1898-99.	Collected or adjusted.	Outstanding on 1st April 1899.
	1	2	3	4	5
		Rs.	Rs.	Rs.	Rs.
Orissa Midnapore Sone	 	 664 3,518 1,475	2,73,191 1,12,341 9,30,504	2,73,855 1,10,141 9,31,979	Nil 5,718 Nil
	Total	 5,657	13,16,036	13,15,975	5,718

VALUE OF

182. In the following table a comparison is made between the approximate value of crops irrigated by Major Irrigation Works during 1898-99 and the previous year:-

	189	7-98.	189	8-99.
Canals.	Area irrigated.	Value of crops.	Area irrigated.	Value of crops.
1	2	3	4	5
	Acres.	Rs.	Acres.	Rs.
Orissa Midnapore Sone	195,602 72,206 433,445	71,26,786 22,38,386 1,68,71,871	194,847 74,901 440,796	71,04,804 19,34,946 1,31,65,003
Total	701,253	2,62,37,043	710,544	2,22,04,753

DATE FOR The average value per REFORTS. From Rs. 37.41 to Rs. 31.25. The average value per acre of the various crops irrigated has decreased

183. The date fixed for the submission of revenue reports to the office of the Chief Engineer is the 5th September. The dates when the different reports were received are shown below:-

and the second second	The first of the second of the		In 1898.	In 1899.
Orissa Circle	Superintending Engineer's report	•••	6th September.	1st September.
South-Western Circle	Ditto ditto		1st ditto.	31st August.
Sone Circle	Ditto		29th August.	31st ditto.

All were punctual.

184. Although the results of the working of the canals in Bengal for 1898-99 are not as good as those of last year or the year before, yet they may be considered fairly satisfactory.

The total area assessed on the Orissa Canals was below that of last year by a small amount, due to the lesser area of rabi irrigation. Revised water-rate rules were brought into force on the 23rd of May 1899 for these canals, but they did not make any material change in the system of irrigation. reduction in the number of complaints and the small number of cases pending at the close of the year is a satisfactory feature. The reduction in tonnage of rice carried over the canals was due to the slackness in the export trade. The number of passengers carried showed a decrease of 34,875 compared with last year, and this may be set down chiefly to the opening of the railway at Cuttack. It is almost certain that the whole of the passenger traffic between Calcutta and Cuttack and vice versa will ultimately be diverted to the railway, but how far the goods traffic will be affected remains to be seen. The weeds in the High Level Canal, Range I, proved a source of great trouble and expense, and were especially bad during the year under review, as the exigence of the steamer service prevented a closure of the canal, and the growth of the weeds received no check. When the steamer service is withdrawn it will become necessary to close the canal for a protracted period in the hot weather to kill the weeds.

The large increase in the length of the village channels constructed by SONE CANALS. the villagers themselves, which amounted to over 350 miles, is a sure sign that cultivators thoroughly appreciate the extra facility for water distribution which is gained by the construction of properly designed field-channels. The rainfall, though in excess of last year, was not so favourably distributed, and the practical failure of the hathia rain was the direct cause of the increased area assessed for unauthorized use of water. The result of the collection is a matter for congratulation: cent. per cent. has been collected, including last year's arrears, and the collection staff deserve great credit for the energetic and tactful manner in which the realization of the water-rates has been carried out. The great care with which the assessment papers were prepared and the punctuality with which they were submitted to the Collection Department were, no doubt, important factors in attaining such excellent results. The navigation receipts are the heaviest on record, but it is unlikely that they will remain so high, as the carriage of materials for the Moghulserai-Gaya Railway gave them a temporary impetus, which it would be unreasonable to expect to last. It is satisfactory to note that the means adopted for flushing the deposit of silt and checking its accumulation at the heads of the canals continues to act successfully. The cost of silt clearance was greater than last year, but the excess expenditure is explained by the closure of the canals, during which period the opportunity was taken for doing extensive silt clearance by hand above and below the locks and at the bifurcations. The system of flushing the canals during the cold and hot-weather months has proved most satisfactory in checking the growth of weeds.

The results of working this canal are not encouraging. The reduction in revenue is very marked, and is attributable partly to the depression in trade and partly to the opening of the Bengal-Nagpur Railway. The expenditure on maintenance was the highest since the year 1894-95, and was entirely due to the large sum which had to be expended in making good the damage done to the canal works by the floods of June 1898.

MIDNAPORE

As in the case of the other navigable canals in Bengal, there was a marked HUMLI TIDAL falling off in the tollage receipts, which is attributed mainly to general depression in trade.

There was a decrease in the number of boats which entered the Circular and Eastern Canals. The decrease was partly due to the bad jute season, and partly to silt-clearing operations in Tolly's Nala, which was closed for the purpose. The number of steamers which paid toll for using the Sundarbans route has increased since last year, and a further increase is anticipated.

The net revenue from the Nadia rivers shows a slight improvement over NADIA RIVERS. that of last year, but this is only due to apportionment of establishment charges, and, so far as can be seen at present, it is hopeless to expect any future material increase in the toll-collections.

2134 SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899.

SARAN CANALS. There was a considerable increase in the maintenance charges of these canals, which was due to the damage caused to the head-works by the September flood.

MADHUBAN CANAL. EDEN CANAL. The working of this canal does not present any special points of interest.

Revised water-rate rules were passed for this canal and are now in force.

The rules do not in any way alter the system of irrigation.

R. B. BUCKLEY,

Chief Engineer, Bengal.

CALCUTTA,

The 10th November 1899.

	Orissa Coast Canal.	128	Rivers pur, Si		rol Isas Canal froiT Vino noilsgiven	43,73,238	44.70.877	44,25,796	46,32,412	I ZZZ	1023	I I I I	1023
ans.	alcutta and Eastern	, =	River Hoogh- ly and Sundarhan	creeks.	Tidal Canals I	63,38,402 89,563	64.97.955	63,69,011	64,61,252	I I I I	474	NIII	414
	Saran Canals.	10	River Gan-	5,082 March	26th, 1884. 1,084. 44·19 64,000 50,000 50,000 30,000	6,69,570	6.96.753	6,94,392	7,21,588	12 12 NS	Nil	63 122 Nil	Nil
.83.	Total.	6		22nd, 1883 16th, 1884	31st, 1884 6,350 43.31 1,733,509 1,354,302 1,016,400 1,016,400	2,58,52,437 9,17,648 29,67,227	2.97,37,312	2,58,43,002 9,17,496 2.38,43,658	5,06,04,156	2181	2181	2181 14884 1,231	2183
SONE CANALS	Western M a i n Canal Series.	00	River Sone.	October February	May 4,500 42:29 1,327,354 1,036,995 707,360	2,58,52,437 9,17,648 29,67,227	,97,37,312	2;58,43,002 9.17,496 2,38,43,658	5,06,04,156	1321 1484 1484 879	1321	1324 1484 881	1321
	Eastern Main Canal Series.	4	River	5,257		2,58,	2,97,3	2,58,4	5,06,0	864 Nil 3504	$86\frac{1}{4}$	864 N:1 3504	863
	Hijili Tidal Canal.	9	Rivers Rup- narain and Russalpur.	Tol.		25,51,729 63,513 2,17,460	28,32,703	25.51,729 63,513 22,41,586	48,56,828	Nil Nil	59	NII	59
	Midnapore Canal.	20	River Cossye	200	1,500 51.48 180,000 173,160 125,000	82,80,766 1,84,661 54,17,730	1,38,83,157	82,80,766 1.84,661 87,24,289	1,71,89,716	53 19 304·89	72	53 19 283.97	72
Ls.	Total.	4	i	:	6,058 58-87 596,878 577,451 467,834 228,566	2,59,98,574 6,85,046 1,21,54,723	3.87,38,343	2,57,88,378 6,84,773 2,37,97,193	5,01,70,344	170\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	2403	1704 1094 1,1014	2043
ORISSA CANALS.	Brahmini - Byturni Series.	80	Rivers Brahmini and By-	Not taken	2,156 62-77 137,500 137,600 96,372 64,282	2,59,98,974 5,85,046 1,21,64,723	3,87,38,343	2,57,88,378 6,84,773 2,37,97,193	0,344	313 65 384	38	313 6 129 129	. * 38
	Mahanadi Series.	69	River Ma- hanadi.	Not taken	3,902 67:92 459,378 439,951 371,462 164,684	2,59,5	3,87,8	2,57,8 6,8 2,37,9	5,01,70,344	11044	2023	1384 103 9714	1663
	*		1	Kharif Rabi Hot weather	second Inches Acres	Rs.	:	Bs.	:	Miles	Miles	Miles	Miles
•	Рактгоплав.		Source of supply of water	Minimum discharge of river-cubic feet Rabi	scharge of canals—cubic feet pe nal rainfall	ust	Total estimate	Expenditure to end of 1898-99- Direct charges Indirect ,, Interest during construction	Total expenditure	Works as now sanctioned— Main canals, irrigation Branch ,, ,, ,, ,, ,, ,, of showe— Of above—	br C	Main canals, irrigation Branch ". Distributaries, including village channels Of above—	Navigable channels

* This shows the cost of construction as now estimated as per Examiner's Administrative Accounts for 1808.99,

* This length is that of the Calcutta and new cut cannis and Tolly's Nals, with 20 miles of Kaorapakur kital. The Eastern Canals are 316 miles in length, steamer route 350 miles, and bheel route between Kumar and Madhumati rivers connecting Khuha with Madaripur, 24 miles. Total length of the Calcutta and Eastern Canals System, 737 miles.

CAPITAL ACCOUNT OF IRRIGATION WORKS IN BENGAL FOR, AND UP TO END OF, 1898-99.

,			DIRECT	CHARGES (NET EXPREDITURE).	T EXPENDIT	URE).		Indirect		
Irrig	IRRIGATION WORKS.	Works.	Establish- ment.	Tools and plant.	Suspense,	Loss by exchange.	Total.	charges, exclusive of interest.	Total capital, excluding interest.	Simple interest.
	1	63	က	4	50	9	7	00	6	10
Major Ir Orissa Project Midnapore Canal Hijili Tidal Canal Sone Project	Major Irrigation Works. To end of previous year Canal To end of previous year Canal During 1898-99 If ond of previous year I Canal During 1898-99 Common To end of previous year Common During 1898-99 Common To end of previous year	Bs. 1,87,36,536 72,229 53,57,053 18,04,139 1,85,66,202 9,522	Rs. 46,51,649 16,495 19,21,656 , 5,83,411 51,81,119	Rs. 20,42,349 1,034 9,07,257 1,41,389 20,74,876 43,788	Bs. 22,026 —22,010	Bs. 2,68,070 94,800 22,790 52,240	Rs. (a)2,57,20,630 67,748 82,80,766 25,51,729 2,58,74,446 —31,444	Rs. 5,82,451 2,322 1,84,661 63,513 9,17,103	Rs. 2,63,03,081 70,070 84,65,427 26,15,242 2,67,91,549 —31,051	Rs. 2,27,67,013 10,30,180 83,93,059 3,31,230 21,39,517 1,02,069 2,28,09,309 10,34,349
Total	To end of previous year	4,44,63,930	1,23,37,835	51,65,871 — 42,754	22,035 —21,997	4,37,900	6,24,27,571	17,47,728	6,41,75,299	5,61,03,838 24,97,828
Minor Wo	Minor Works and Navigation.									
Tirhut Project Damodar " Svran " Orissa Coast Canal Calcutta and Easter Canals.	To end of previous year During 1898-99	90,685 1,200 4,89,269 11,640 83,80,397 3,095 (b)53,35,361 52,140	4,83,948 94,864 1,64,170 7,55,587 699 5,75,751 9,234	6,797 4,800 25,952 3,32,987 3,89,949	 41,987 11,044 2,957 3,619	*	6,31,425 1,40,341 -1,200 6,79,391 15,001 44,10,958 14,838 63,04,018 64,993	74,650 16,239 27,183 1,06,518 90,948 1,293	6,06,075 1,56,580 -1,200 7,06,574 15,014 45,17,476 14,936 63,94,966 66,286	
Total	During 1898-99	65,675	20,24,319	9,50,489	14,944	: :	1,20,66,133	3,15,538	1,23,81,671	11
GRAND TOTAL	To end of previous year Unring 1898-99	5,38,00,319 1,47,426	1,43,62,150 29,329	58,26,356	66,979	4,37,900	7,44,93,704	20,63,266	7,65,56,970	5,61,08,898 24,97,828

Receipts on Capital Account deducted from the following heads:-

Total.	Rs.	52,249	1,200		3,293		54,467	:	
Tools.	Bs.	2,300	:	ı	9	:	:	:	
Establish- ment.	Rs.	i	÷	:	260	;	:	:	
Works.	Rs.				3,028				
		Damodar Project { To end of previous year	(Do end of previous year	Saran Project During 1898-99	Orissa Coast Canal To end of previous year	Calcutta and East. (To and of mornions man	ern Canals. During 1898.00	*** *** ****	
Total.	Rs.	86,795	31.558	:	952	4.14.150	3,000	158	:
Tools.	Rs.	28,280	11.590	:	915	1.52.226		39	:
Establish. Tools.	Rs.	13,300 28,280	7,300		:	2,29,213 * 82,711 1.52,226		74	:
Works, 1	Rs.	45,215	12,668	:	10	2,29,213	3,000	45	::
		Orissa Project \ During 1898-99	To end of previous year	midnispore Canal During 1898-99	Hijili Tidal Canal Thrine 1898.99		Done Froject During 1898-99	Tirhut Project { To end of previous year	Charing 1888-99

I

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION

Realizations under main heads of

				REV	ENUE (A	CTUAL	RECEIPTS	8).				
		IRRIGAT	rion.					1		mds).		REVENT
IBBIGATION WORKS.	directly	reve-	- 1	*	lands.			A	Je.	s refu		Establi
	Water-rates di	Share of land nue,	Total.	Navigation.	Plantations and	Water-power.	Miscellaneous.	Total.	Refund of revenue.	Gross receipts (less refunds).	Direction.	Execution.
1	2	8	4	5	6	7	8	9	19	11	12	13
MAJOR IRRIGATION WORKS.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Po	
Orissa Project	2,72,382		2,72,382	1,72,649	3,628		20,895	4,69,554	4,062	4,65,492	Rs.	Rs.
Midnapore Canal	1,07,554		1,07,554	1,03,681	103		22,434	2,33,772	5,040	2,28,732	4,35	
Hijili Tidal Canal				73,759	22		1,505	75,286	980	74,306	643	1
Sone Project	9,29,016	-	9,29,016	1,05,564	2,883	1,031	36,771	10,75,265	3,853	10,71,412	4,135	
	13,08,952		13,08,952	4,55,653	€,636	1,031	81,605	18,53,877	13,935	18,39,942	13,975	1,91,060
MINOR WORKS AND NAVIGATION.						-		-			-	
Works for which capital and revenue accounts are kept.												
Saran Project	4,318		4,318		5		669	4,992		4,992	26	60
Orissa Coast Canal				72,954			2,082	75,036	1,942	73,094	1,221	7,739
Calcutta and Eastern Canals.				3,77,092			32,682	4,09,774	493	4,69,281	\$,699	25,134
Total	4,318	,	4,318	4,50,046	. 5		35,433	4,89,802	2,435	4,87,367	4,916	32,933
Works for which only revenue accounts are kept.									100.00			
Nadla Rivers				89,279			147	89,426	10	89,416	1,340	8,050
Gaighatta and Buxi Khal	*			4,500				4,500	36	4,164	7	45
Total				93,779			147	93,926	46	93,880	1,347	8,095
Vorks for which neither capital nor revenue accounts are kept.							2000					
dea Canal	28,333		28,833				592	28,925	200	28,725		
Madhuban Canal							120	120		120		- []
Total	28,333		28,333				712	29,045	200	28,845		
otal Minor Works and Navigation.	52,651		82,651	5,43,825	5		36,292	6,12,773	2,681	6,10,092	6,293	41,028
GRAND TOTAL	13,41,603		13,41,603	9,99,478	6,641	1,031	1,17,897	24,66,650	16,616	24,50,034		2,32,088

⁽b) Rupees 8,394 and Rs. 944, respectively, were expended during the year on account of salaries and travelling allowances of the temporary establishment



WORKS IN BENGAL FOR THE YEAR ENDING 31st MARCH 1899.

Revenue and Working Expenses.

			1		W	ORKING	EXPENS	ES.							
MANAG	EMENT.						MAINTEN	ANCE OF	Works.					ex-	
ment.	1 0		1000	Establi	shme	nt.			(suspense ac-			rges.		working	
Navigation.	Civil officers. (a)	Total,	Direction.	Execution.	Medical.	Total.	Works,	Repairs.	Sundries (suspe	Tools and plant,	Plantations,	Total direct charges.	Irdirect charges.	Grand total, w	Net revenue.
14	15	16	17	18	19	20	21	29	23	24	25	26	27	28	29
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	R.
17,195	66,114	1,61,778	4,840	73,630		78,470	14,300	1,77,926		27,659	1,403	4,61,536	33,677	4,95,213	-29,72
8,091	26,978	50,810	4,358	11,383		15,741	10,630	1,63,563		23,776	143	2,64,663	9,317	2,73,980	-45,24
3,763		10,719	642	6,314		6,956	4,116	21,517		4,190	57	47,555	2,474	50,029	24,27
15,410	1,52,692	2,71,971	4,136	99,783		1,03,869	8,230	1,51,848	14	14,363	5,332	5,55,627	52,618	6,08,245	4,63,167
44,459	2,45,784	4,95,278	13,976	1,91,060		2,05,036	37,276	5,14,854	14	69,988	6,935	13,29,381	98,086	14,27,467	4,12,475
															4
6,821		15,781	1,221	7,740		8,961		1,061				1,233	24	1,257	3,735
10,985		69,768	3,699	25,135		28,834	16,338 2,828	32,510		5,234	757	78,824 2,66,873	3,464 13,804	82,288 2,80,677	-9,194 1,28,604
7,756		85,635	4,947	32,934		37,881	19,166	1,77,949	-	25,542	757	3,46,930	17,292	3,64,222	1,23,142
				÷								1			
23,093		32,483	1,340	8,050		9,390	-	53,611	-2,968	1,044		93,560	5,862	99,422	-10,000
-		52	7	44		51		278				381	14	395	4,069
3,093		32,535	2,347	8,094		9,441		53,889	-2,968	1,044		93,941	5,876	99,817	-5,937
	(b)		9,495			9,495	8,102	21,386		397	*	39,380		20 250	
			2,610			2,610	34	6,882		43		9,569	-	9,569	-10,655 -9,449
			12,105			12,105	8,136	28,268		440		48,949		48,949	-20,104
0,849		1,18,170	18,399	41,028		59,427	27,302	2,60,106	-2,968	27,026	757	4,89,820	23,168	5,12,988	97,10
15,308	2,45,784	6,13,448	32,375	2,32,086		2,64,463	64,578	7,74,960	-2,954	97,014	7,692	18,19,201	1,21,254	19,40,455	5,09,579

consisting of zilladars, muharrirs and patrols, employed for the supervision and management of irrigation and collection of revenue from the Eden Capat.

IIC.

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION WORKS IN BENGAL FOR 1898-99, BASED ON ACTUAL RECEIPTS.

Principal Results of Operations for the year ended 31st March 1899.

	Direct and indirect	Gross re- ceipts, direct and	Working expenses,	Net revenue (excluding	of net reve- apital out- of the year.	4 per cent. capital mencement nd 2 per	AFTER P	REVENUE AYING IN- ON DIRECT OUTLAY.	Excess Concluding on Direct Out	CAPITAL
IRRIGATION WORKS,	outlay to end of 1838-99.	indirect, from all sources.	direct and indirect.	charges for interest).	Percentage of net revenue on capital outlay to end of the year.	Interest at 4 per cent. on direct capital at commencement of year and 2 per cent. on outlay during the year.	Amount.	Percentage on total sum at charge.	Amount.	Percen age on total sum at charge
1	2	3	4	5	6	7	8	9	10	11
Major Indigation Works.	Rs.	Rs.	Rs.	Rs.	10	Rs.	Rs.	Fs.	Rs.	
In operation.									and the state of t	
Hijili Tidal Canal	26,15,242	74,306	50,029	24,277	.93	1,02,069			77,792	2.97
In progress.					1828.					
Orissa Project	2,63,73,151	4,65,492	4,95,213	-29,721	deficit	10,30,180			10,59,901	4.02
Midnapore Canal	84,65,427	2,28,732	2,73,989	-45,248	deficit *53	3,31,230	199		3,76,478	4.45
Sone Project	2,67,60,498	10,71,412	6,08,245	4,63,167	1.73	10,34,319		•••	5,71,182	2.13
Total	6,42,14,318	18,39,912	14,27,457	4,1 ',475	.64	24,97,828			20,85,853	3.25
applies to the Armer Co.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					-				-
MINOR WORKS AND NAVIGATION.				- 2.4	420.26	kon (j. j. lin	H1.			
In operation.							en entre		we.	
Saran Project	7,21,588	4,992	1,257	3,735	.52					
Calcutta and Eastern Canals.	64,61,252	4,09,281	2,89,677	1,23,604	1.99	***	•			-
Nadia Rivers		89,416	99,422	-10,006		*				
In progress.	10 to		675	10,00		es la la				
Orissa Coast Canal	45,32,412	73,0 4	82,288	-9,194	deficit					
Geighatta and Buni Khal.	II	4,461	395	4,069					•••	
Abandoned or held in abeyance.	The second secon		-				(fr.1)	i 197 mentana dan bangsa dipingsa M	opania in the same	
Tirbut Project	6,06,075									
Damodar "	1,55,380		7%	1.246.0	191 F	10,5	1910/19			A, 128
Total	1,24,76,707	5,81,247	4,64,039	1,17,268		57.21 a		and the Control of th		

IIIC.

DEMANDS AND REALIZATIONS DURING THE YEAR 1898-99.

Service Control of the Control of th	Balance of demands unrealized at com- mencement of the year.	Demands of the year.	Total.	Deduct remissions not including eash refunds.	Net total.	Deduct amount unrealized at end of the year.	Actual receipts of the year.
1	2	8	-4	5	6	7	8
Major Irrigation Works.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa Project	664	4,70,363	4,71,027	1,473	4,69,554		4,69,554
Midnapore Canal	3,518	2,38,559	2,42,077	2,587	2,39,490	5,718	2,33,772
lijili Tidal Canal		75,286	75,286		75,286		75,286
one Project	1,475	10,76,753	10,78,228	2,963	10,75,265	o beniraT	10,75,265
Total	5,657	18,60,961	18,66,618	7,023	18,59,595	5,718	18,53,877
Minor Works and Navigation.					#	ji	
aran Project	6,786	(a)674	7,460	•••	7,460	2,468	4,952
rissa Coast Canal	•••	75,036	75,036	•••	75,036		75,036
alcutta and Eastern Canals		4,09,774	4,09,774		4,09,774	n in Man	4,69,774
adia Rivers		89,426	89,426		89,426	Lang bar	89,426
sighatta and Buxi Khal		4,500	4,500		4,500	n sehren n	4,500
Total	6,786	5,79,410	5,86,196		5,86,196		5,83,728
GRAND TOTAL	12,443	24,40,871	24,52,814	7,023	24,45,791	8,186	24,27,605

Note.—Refunds of revenue have not been deducted from the actual receipts of the year.

(a) Miscellaneous collections.—There was no assessment of water-rates during the year,



IV

STATEMENT SHOWING THE FINANCIAL RESULTS OF IRRIGATION WORKS IN BENGAL

Principal results of operations for

			Note that the	RI	EVENUE .	ASSESSE
	Capital out-				Dire	CT ASSESS
IRRIGATION WORKS.	lay (direct and indirect) to end of the year.	Occupier's rate (water-rates).	Owner's rate.	Plantations.	Water-power.	Navigation.
1	2	3	4	* 5	6	7
MAJOR IRRIGATION WORKS,	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Orissa Project	2,63,73,151	2,70,272		3,628		1,67,807
Midnapore Canal	84,65,427	1,12,341		103		1,04,528
Hijili Tidal Canal	26,15,242			22		73,759
Sone Project	2,67,60,498	9,38,607		2,883	1,031	1,05,087
Total Major Irrigation Works	6,42,14,318	13,21,220	•••	6,636	1,031	4,51,181
MINOR WORKS AND NAVIGATION.		in the second				
Works for which Capital and Revenue accounts are kept.						
Saran Project	7,21,588			5		
Orissa Coast Canal	45,32,412					72,954
Calcutta and Eastern Canals	64,61,252		*			3,77,092
Total	1,17,15,252			5	•••	4,50,046
Works for which only Revenue accounts are kept.		41	September 1			Ya Yaka
Nadia Rivers						89,279
Gaighatta and Buxi Khal	1. Bisks					4,500
Total	•••		•••			93,779
Works for which neither Capital nor Revenue accounts are kept.						
Eden Canal		33,876	•••		200 - 100 -	
Madhuban Canal					•••	
Total	and the same	33,876	eng is ••• en ja			
Total Minor Works & Navigation	A CONTRACTOR	33,876		5	•••	5,43,82

N.B.—The assessed revenue means the revenue assessed on the irrigation of the year independently of whether the demand statements

FOR THE YEAR ENDED 1898-99, BASED ON ASSESSMENTS OF THE YEAR.

he year ended 31st March 1899.

URING	THE YEA		The artist of the	Links .		ses,	one	ital the
Miscellane-	Total.	Refunds of revenue.	Gross assessed revenue,—less refunds.	Indirect revenue -Land revenue due to operations of canals.	Grand total.	Working expenses, direct and indirect.	Net assessed revenue of the year.	Percentage on capital outlay to end of the year.
8	9	10	11	, 12	13	14	15	16
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	
20,895 22,434 1,505 36,771	4,62,602 2,39,406 75,286 10,84,379	4,062 5,040 980 3,853	4,58,540 2,34,366 74,306 10,80,526		4,58,540 2,34,366 74,306 10,80,526	4,95,213 2,73,980 50,029 6,08,245	(—)36,673 (—)39,614 (+)24,277 (+)4,72,281	deficit. 0·13 deficit. 0·46 profit. 0·92 profit. 1·76
81,605	18,61,673	13,935	18,47,738	••	18,4~,738	14,27,467	4,20,271	profit. 0.65
669	(a) 674		674	***	674	1,257	(—)583	deficit.
2,082 32,682	75,036 4,09,774	1,942	73,094 4,09,281		73,094 4,09,281	82,288 2,80,677	(—)9,194 (+)1,28,604	deficit. 0·20 profit. 1·99
35,433	4,85,484	2,435	4,83,049	Andrew State of the State of th	4,83,049	3,64,222	1,18,827	profit.
147	89,426	10 36	89,416 4,464	***	89,416 4,464	99,422 395	(—)10,006 +4,069	
	98,926	46	93,880	a in the county (Sensor In-	93,880	99,817	()5,937	
592 120 712	34,468	200	34,268 120	•••	34, 268	39,380 9,569	(—)5,112 (—)9,449	
6,292	84,588	200	34,388		34,388	48,949	(-)14,561	
on of water	6,13,998	2,681	6,11,317		6,11,317	5,12,988	98,329	

Noted within the year or not. The actual amount of the demand statements issued during the year is given in column 3 of Table IIIC.

ID.
STATEMENT OF TRAFFIC ON CANALS IN BENGAL DURING THE YEAR 1898-99.

Particulars.	Orissa Canals.	Midnapor Canal.	e Hijili Tidal Canal.	Sone Canals.	Calcutta and Enstern Canals.	Orissa Coast Canal.	Total.	Nadia Rivers.	
1	2	3	4	5	6	7	8	9	Ì
Length of canal open for navigation Miles	s 204 ³ / ₄	7	2 29	218	732	102	1,363	470	01
RECEIPTS.									
Tollage—Private boats Rs.	1,28,227	1,00,94			3,71,876		8,32,348	88,736	3
Rafts Carrying operations or trans-	8,090 36,332	2,736	168	6,460 12,512	218	1,161	18,833 48,844	524	
port services.) boats. Fines and sundries ,,		*7,278	362		4,998	313	12,951	19	
Total receipts	1,72,649	1,10,959	73,759	1,05,563	3,77,092	72,954	9,12,976	89,279	
Maintenance charges, in- cluding special navigation establishment,	28,360	16,242	51,009	36,864	2,81,170	84,230	4,97,875	99,432	
Net revenue of year	1,44,289	94,717	22,750	68,699		()11,276	4,15,101	(-)10,153	1
Total number of boats ply- ing cargo No. Ditto ditto passenger ,, Ditto ditto empty boats ,,	13,357 1,664 11,007	15,268 12,733 8,256	1,329	5,940 707 3,419	74,466 6,558 (a)32,362	6.717 2,651 6,625	125,804 25,642 67,978	16,672 19,047 (b)8,395	
Total	26,028	36,257	17,694	10,066	113,386	15,993	219,424	44,114	-
Total registered tonnage of boats by canal measurement, cargo Tons Ditto ditto passenger ,, Ditto ditto empty boats ,,	220,539 64,723 71,919	251,137 67.881 56,861	172,623 18,907 87,776	128,663 12,462 22,741	707,274 7,185 218,702	98,728 33,860 34,757	1,578,964 205,018 442,756	592,283 30,165 64,535	2
Total	357,181	375,879	229,306	163,866	933,161	167,345	2,226,738	686.983	2,
Ton-mileage - Up Tons Ditto — Down "	5,764,756 5,908,262	2,864,094 3,526,705		4,128,670 3,814,850	1,058,352 7,159,085		17,463,170 25,717,630	} Nil	
Total ,,	11,673,018	6,390,799	4,315,874	7,943,520	8,217,437	4,640,152	43,180,800	Nil	
Estimated value of cargo— Up Rs. Down ,,	54,90,168 42,35,879	61,19,709 49,29,272	20,52,112 32,48,352	31,13,55 7 42,33,993	46,77,334 4,44,19,221	14,23,472 17,96,074	2,28,76,352 6,28,62,791	62,69,063 1,00,97,809	2,91 7,29
Total	97,26,047	1,10,48,981	53,00,464	73,47,550	4,90,96,555	32,19,546	8,57,39,143	1,63,66,872	10,2
Number of passengers - Total No.	83,320	218,181	28,431	61,226	45,623	43,437	480,218	61,1(9	
Rafts, feet × feet × feet —Up c. ft. Down "	261,202 885,719	9,527 234,331	20,129 2,751	2,301 2,139,272	25,842 20,341	5,991 60,602	324,992 3,343,016	270 247,677	3
Total "	1,146,921	243,858	22,880	2,141,573	46,183	66,593	3,668,008	247,947	3
Estimated value of rafts— Total Rs.	3,57,867	1,24,794	12,826	2,23,265	78,125	52,916	8,49,793	62,588	
Tollage on boats per ton per mile Pies	0.1	0.00	n.o.						
Tollage on rafts per 100 cubic feet Rs.	0.71	0.03	3·25 0·73	4 82 pies. 2.09 annas.	8·69 0·47	2.95		Nil 0:21	

* Koyali rent. Examiner has included this amount with "Miscellaneous Receipts."

(a) Inclusive of 102 rafts.

(b) Ditto of 314 steamers, 97 flats and 270 rafts.

IID.

DESCRIPTION AND QUANTITIES OF GOODS, &c., CARRIED ON CANALS IN BENGAL DURING THE YEAR 1898-99.

2 2 4 4 15 15 15 15 15 15	DESCRIPTION OF			TOTAL.	T.						OKE	CANAL.				HIJIEL	TIDAL CANAL.	NAL.		00 00 00 0 00 0		SONE	SONE CANALS		
2 2 4 2 6 6 7 8 9 9 9 11 13 13 13 13	GOODS, &C.	-				FR	VATE.			TOTAL.		PR	IVATE.		T	OTAL,		PRI	VATE.	10	04				d
1		and a	untity	Fons,	Value.	Quantity		0	uantity-	Tons.	Value.	Quantity	-	Qu	antity-7	ons.	Value.	Quantity.		0	D Hitter			PEL	
Up Dorn Total Ray Graph Lay		91	60		2	9	7	o	6	10	п	12	13	14	15	16	17	18			1	ons.	Value,	tilly.	Value,
1.0 1.0	BOAT TRAFFIC.	Up.	Божп.	2153	Rs,	Tons,	Rs.	Up.	Down.	-	Rs.	Tone	D-	1				2	RI .	50	21	31	23	24	- 25
1.00 1.00	ofton, raw and ma		T.	1,049	6,07,030			3 42			19,32,220	1,099	Rs.	Up.	Down.	Total.	Rs.	Tons.	Rs.	Up.	Down.	Total.	Rs.	Tons	Do
1,50, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0	manufactured,		1	ı	ı	1	1	1		;	1	1		1	!	452	5,13,600	433	5,13,600				11,13,770	1,058	1,058 11,13,770
			22,907	38,395	29,77,571		183		9	549	1,59,540	-	1,29,540			1	8,000	-	8,000	16	1	94	62,470	76	62,470
Secondary Seco		-	976	954	2,60,430		12.1			33,144	21,80,428		21,80,428	139	52,020	52,159	29,39,697	52,159	29,39,697		1000	6.937	1,730	1	
1,500 1,50			456	995	1,48,604		9000			8 741	17,750		17,750	e3 :	45	7	15,610	44	41,910			7,459	4,67,712	7,159	4,67,712
1, 10	suc		2,784	4,190	4,77,040					2,466	2.89,289		2,89,289	2,852	1	2.85	10,560	64	10,560		16	307	7 53 908	272	1,36,
Fig. 1, 150, 150, 150, 150, 150, 150, 150, 1	1		3,804	4,169	4,28,067					2,818	2,51,096	-	2,53,096	593		478	55,725	2,602	55,725		19 994	315	37,249	S15 37,249	7,50,
4.14 \$1.0	7.00		1,509	1,734	15,36,460		9 14			705	1,30,043	8,445	8,97,885	4,504	7	4,511	4,82,000	4,511	\$3,907	ROW.	Sec.		1,77,186	13,115	11,77,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,			23,159	27,273	17,450					456	5,81,667	1,711	2,81,667	2,215	15		6,170 2,63,156	2,330	6,170	190	15	317	25 25	4,223	4,20,913
4.08 8.576 8.478 1.48.678 1.88.778 1.88	100		9,247	3,396	15,60,165					8,844	8,81,471	5,454	8.81.471	1,429	591	2,020	3,19,860	2,393	3,19,860		1,200	1,266	,69,414	1,424	1,59,41
State Stat	11	19	88	1,029	818		19.6			378	1,28,976	1,334	1,28,975	166	8	250	2,03,058	5,163	2,03,058	9,440	7,876	16,816 18	,29,058	3,124 1,24,588 16,806 19,24,759	1,24,
1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,	11	8	875	883	1,56,434					5,268	38,510	5,268	38,510	2,546	00	9 548	455	90 9	818	91,043	141		2,318	1,780	9,03
C. ft. C	boa	-					:	1	17	17	11,37,956	17	11,37,956	11	1,336	1,336	94,443	1,336	18,761	16,797	23		18,189	16,879	2,15,877
C. ft. C.		-	75,946	127,263	97,26,047	127,263	97,26,047				1,10,48,981		1.10.48.981	18.666	1 000			1		1	1	1		1	1
C. ft. C.														1	900		53,00,464	77,535	53,00,464	39,843			47,550	76,759 7	73,36,868
C. ft. C. ft.<																									
214,554 302,127 6°6,681 3,00,266 606,681 3,00,266 8,554 30,518 30,072 40,402 39,072 40,402 5,914 1,636 7,540 10,241 7,540 10,241 7,540 10,241 7,540 10,241 7,540 10,241 7,540 10,241 7,540 10,408 304 6,430 10,408 14,215 11,146,221 3,100,88,3014 {1,146,221 3,100,88,3014 1,146,211 3,100,88,3014 {1,146,211 3,100,88,3014 1,146,211 3,100,88,3014 1,146,211 3,100,88,3014 1,146,	RAPT TRAPFIC.	C. ft.	0. ft.	C. ft.		O. rt.		-	C. ff.	* 0		2							,						
46.644 485.757 58.85	mber in logs	214,554	92,127	606,681	3,00,266	606,681	3,00,268	8 55.5	90 210	3 50	00: 07	. II.		C. ff.									_		
46.648 485,757 52,825	epers, broad gauge		i :	::	: :	1 :	1		010,00	22,072	201 '66	39,072	49,405	5,914	1,626	7,540	10,241	7,540	10.941	-				Tons.	Tons.
46.648 485,775 66.548 485,775 66.586 98,713 64.894 98,713 64.894 98,713 64.894 98,713 64.894 98,713 64.894 98,713 64.894 98,713 64.894 98,713 10,408 14,515 1,126 11.86 91.24 11.86 92.83 11.86 92.71 11.46 92.83 124,794 243,808 1,146,921 3,106,83,914 483,818 11.173,775 88.809 28,809 38,18,990 38,18,990 37,4717 11.173,775 38,809 38,809 38,18,990 38,18	intlings sauge	11	11	1:	11	1	::	, ;	::	1:	1:	1		::	::	::	::	1			254	254	3,302	254	3.303
46.548 485,757 582,415 66,791 58,785 10,408 10,40	poome			7 89.5					98.338	98 719	61.894	00 710		: :	::	1 1	;	1	::	1 1	391		7,309		7,30
201,302 285,719 1,146,921 3,57,867 4,511 28,583 3,57,867 4,511 28,583 3,57,867 3,511,46,921 4,511 28,583 3,57,867 3,511,46,921 4,511 28,583 3,57,867 3,511,46,921 4,511 28,583 3,57,867 4,511 28,583 3,57,867 4,511 28,583 3,57,867 4,511 28,583 3,57,867 4,511 28,583 3,57,867 4,511 28,583 3,57,867 4,511 28,583 3,57,867 4,511 4,511,78,778 4,511,78,788 4,511,788	spa spa	46.648		552,415	56,791	532,415	46		-	06,073	10,498	106,073	10,498	14.915	-	1 10		11	111	1:	-		8,130		8,030
51.317 77.596 127.263 3 1.00.88,914 { 1.146,921 3 1.00.88,914 { 1.146,921 3 1.00.88,914 } 1.10.088,914 { 1.146,921 3 1.00.88,914 } 1.10.088,914 { 1.146,921 3 1.00.88,914 } 1.10.088,914 { 1.146,921 3 1.00.88,914 } 1.10.088,914 { 1.146,921 3 1.146,	ic. {C. ft.			-	3.57.887	-	3 K7 600	1	-!-	1	:-			:	-1	010,010		15,340	2,585			-	3,527	9,807	3,01
261,902 886,719 1,146,921 \$1,00,88,914 { 1,146,921 \$1,00,88,914 { 4,511 53,914 \$ 4,521 234,331 243,868 } 1,11,73,775 { 2,43,868 } 1,11,73,775 { 29,189 } 2,13,289 } 2,13,289 } 3,13,290 { 77,635 } 33,13,290 { 77,635 } 33,13,290 { 77,635 } 33,13,290 { 89,829 55,918 35,397 } 35,837 }	-	-	27 076		1	126'941'1)	inotinto!	2 /20%		243,858	1,24,794	243,858	-	20,129	-	2,880	12,826	92,880	12.896		-	1	1	519	11
ZANGORO ZANGOR	*******		5,719 1,		1,00,83,914	1,146,921	1,00,83,914	9,527 98	-	97,4713 1.	78.775 {	97,4713	15	1	698	1	0.00				-	210	2.65	18,732	222,815
	1	-	-						-	(909'09)		2, 13, 858 5	~		121	m	12.00	22,880				5,837 75,7	136	95.491 75	75 59 688

DESCRIPTION AND QUANTITIES OF GOODS, &c., CARRIED ON CANALS IN BENGAL DURING THE YEAR 1898-99.

NADIA RIVERS.	TOTAL, PRIVATE,	Tons. Value. Quantity. Value.	40 41 42 43	1. Total, Rs. Tons. Rs. 750 5 750	1	31 826 31 11,539 10,14,489 11,639 35,323 20,92,270 35,823	1 1,490 1 473 8,28,327 473 8,280 2,230 2,230 90,298 21,89,800 80,998	2, 684 92, 667 2, 684 9, 922 110 12, 684 110 480 50 841 869 110	2,784 2,79 345 2,36 3,48 3,18 3,29 3,48 3,48 3,58 3,58 3,58 3,58 3,58 3,58 3,58 3,5	2,167	854 9,489 1,30,765 9,489 1,30,705 1,100 12,178 18,89,515 12,178 13,69,616	300 156,142 1,63,66,872 156,142 1,63,66,873	099°L,	18,985 38,210 18,985	1111	182 228,182 22,818 228,182 22,818	247,947 62,588 2	156.142 7
		Quantity-Tons.	38 39	Up. Down.	1	2,609 9,030 9,462 25,861	269 289 289	Got	2,541 2,541 14,889 14,889 30,018			51,342 104,800		270 18,	111	228,182	270 247,677	51,342 104,800
	ATE.	Value,	37	Rs. 94.150	ı	1,80,14,612	8,31,917	12,03,749 12,03,749 52,69,415 7,66,225	1,73,357 7,73,963 77,71,467	6,01,600	2,44,650	4,90,96,555	78.095		111	2,090	78,125	3400 24 000
ANALS.	PRIVATE.	Quantity.	98	Tons.	1	199,798	3,355	10,054 10,054 53,682 3,743	1,038 78,260 78,087	84,003	33,582	656,096	080-06	11	111	17,094	46,183	656.006
CALCUTTA AND EASTERN CANALS.		Value.	38	Rs. 94.150	:	1,80,14,512	3,31,917	12,03,749 59,69,415 7,66,225	7,73,963	6,01,600	2,44,650	4,90,96,555	76 00%	11	1,11	2,090	78,125	,
TTA AND	AL.		88	Total.	,	199,798	2,251 3,355	5,51, 10,054 58,682 3,743	1,038 78,260 78,087	84,003	\$3,582 92,500	906,949	00 00	600° : : :	1:3	17,094	46,183	656 0063
CALCU	TOTAL.	Quantity-Tons.	83	Down.	1	199,737	1,899	8,245 7,247 17,457 8,742	217 936 76,755 73,286	83,945	13,748	588,974	000	182°0	11	17,094	20,341	K88 074
a .		Qui	35	Up.	1 1	 19 11	352	2,807 36,225	1,505 1,505 4,801	:	19,834	67,033	0.0	20,032	11	111	25,842	67 089
	PÍ	Value.	31	R.s.	overfort.	14,14,140	2,01,169	24,085 3,40,692 13,795	1,18,205 2,92,970 12,301 2,38,861	2,998	19,202 31,245 3,00,000	82,19,546	070 07	90,240 	11	4,670	52,916	
	PRIVATE.	Quantity.	30	Tons.		4.44	2,084 2,084	3,318 199	1,064 1,761 8,529	627	2,670 413	48,280	0.0	soc'ne	11	36,235	66,593	C 080 87
ORISSA COAST CANAL.		Value.	53	Rs.	and for the	14,14,140	2,01,169	9,370 24,085 3,40,692 13,795	1,18,205 2,32,970 12,301 2,38,861	2,988	19,202 31,245 3,00,000	32,19,546		46,246	11	4,670	58.916	
RISSA CO.	A.		88	Total.	١,	30,483	35 2,084	3,318 3,318 199	1,0:4 1,761 8,529	627	2,670	48,280	000	ece,,ee	1.1	36,235	66,593	40 900 V
3	TOTAL.	Quantity-Tons.	27	Down.	•	28,862		1120	8 181 1,001	230 42	413	31,251		26,717	11	33,885	60,602	61 021
		Qua	26	Up.	1 .	1,621	34	320 3,176 193	1,056 1,753 094 2,438	603	2,669	17,029		3,641	11	2,350	5.891	17 000
		DESCRIPTION OF GOODS, &C.		BOAT TRAFFIC.	factured. Woollen goods, raw and	Dyes and tans	Hides and skins Liquors	Oil-seeds	Sugar Tobacco Building materials Miscellaneous goods	Timber Firewood	Coal and coke	Total boat traffic, Tons	PH	Square timber "." Sleepers, broad gauge	Scantlings	Firewood	Total raft traffic, C.ft.	- C Tome

IE.

STATEMENT OF AREAS IRRIGATED BY IRRIGATION WORKS IN BENGAL DURING THE YEAR 1898-99.

		ARI	EAS IRRIC	SATED I	N ACRE	is.	liforn market	AVERA	GE DIS	CHARGE R SECON	CUBIC D.	AREAS	IRRIG OOT PE	ATED PEI	R CUBI
NAME OF CANAL.	Kharif	. Rabi.	m			D	OPPED.	Ат 1	IEAD.	UTIL	IZED.	DISCHA	-		IZED.
		. Maul.	Total.	Flow.	Lift.	Area irri- gated	Per- centage of total area.	Kharif.	Rabi.	Kharif,	Rabi.	Kharif.	Rabi.	Kharif,	Rabi.
1	2	8	4	5	6	7	8	9	10	11	12	13	14	15	16
ORISSA CANALS.				1270 (15.00)	1	1 3260		7.5			1 1			1	1 0 0 0
endrapara Canal and its branches Idanda ditto ditto gh Level Canal, Range I	73,756 51,146 22,211	0 85	74,371 51,175 22,232	74,371 51,175 22,232		=		1,117 759 800	479 275 129	1,031 653 153	342 100 12	66 69	t	71 78	†
Total Mahanadi Series	147,101	677	147,778	147,778		-		2,176	883	1,837	454	74	***	145	
th Level Canal, Range II Ditto ditto III pur Canal	2,995 29,038 10,624	210	3,181* 29,248 14,640	3,181 29,248 14,640	:::			35 238	14	35 238	14	86 122		81	
otal Brahmini-Byturni Scries	42,657	4,412	47,069	47,069				113	26	90	23	94		122 118	
Total Orissa Canals	189,758	5,089	194,847	194,847				386	40	363	87	110		118	***
								2,562	923	2,200	491	74		86	
MIDNAPORE CANAL.					14 - Art 16						- 12	100			
der Midnapore Weir der Panskura Weir al Reaches, Ranges I and II	62,950 6,394 1,397	4,160	62,950 10,554 1,397	62,950 10,554 1,397		::	:::	144·96 28·84	84°38 44°07	115.01 17.71	56°145 21'785	434°25 273°95	94.39	547·34 361·04	
Total Midnapore Canal	70,741	4,160	74,901	74,901			-							301.09	190.95
n Canal	29,018	739	29,757				-	940-00							•••
						***	-	348.90	112.53	198.81	27.53	83.16	6*58	145 95	26'84
SONE CANALS.															
m Main Canal Series	75,490 229,288	11,526 98,509	87,016 327,797	85,969 317,623	1,047 10,174	-		1,216 3,015	965 2,992	829 2,069	237	62.08	11.94	91.06	48.63
Total Sone Canals	304,778	110,035	414,813	403,592	11,221			4,231	3,957	-	1,184	76:04	32.93	110.83	83:20
Canals		1000000		-	Canal	Word -	losed dur		The second second	2,898	1,421	72:03	27.80	105.17	77'44

Exclusive of 25,983 acres of hot-weather irrigation consisting of 25,127 acres flow irrigation and 856 acres lift irrigation. Not filled in by Superintending Engineer as the areas of rabi were very small.

IIE.

STATEMENT SHOWING THE INCIDENCE OF WORKING EXPENSES AND ASSESSED WATER-RATES ON CANALS IN BENGAL DURING 1898-99.

	discharge of the year il head in cubic feet and,	-	-RATES	ASSESSED	DURI			direct and	during the	1	Work	ING SES.	R	UPIER'S ATES. PR-RATES.	RATE	L WATER
NAME OF CANAL.	Average discharge at canal head in per second,	Occupier's rates (water-rates).	Owner's rates.	Total direct.	Indirect,	Total of direct and indirect.	Gross assessed revenue all sources.	Working expenses, di	Acres irrigated duryear,	Per cent. on gross revenue.	Per acre irrigated.	Per cubic foot per second of discharge.	Per acre irrigated.	Per cubic foot per second of discharge.	Per acre irrigated.	Per cubic foot per second of discharge.
1	2 *	-8	4	5	6	7	8	9	10	n	12	13	14		- 22340	1 4
Canals Canal Sidal Canal	1,453 90°21 3,006	Rs. 2,70,272 1,12,341 9,38,607	Rs.	Rs, 2,70,279 1,12,341 9,38,607	Rs.	Rs 2,70,272 1,12,341 9,88,607	Rs. 4,58,540 2,34,366 74,306	Rs. 4,95,213 2,73,980 50,029	Acres. 194,847 74,901	Rs. 107.99 116.90 67:33	2.24	340·82 3,037·13	1:88 1:50	186°01 1,245°33	1'38 1'50	186°01 1,245°33
Total WORKS AND NAVI-		13,21,220	-	13,21,220		13,21,220	10,80,526	6,08,245	440,798 710,544	77°25	1:38	202:34	2.13	312.24	2.13	812-24
GATION. vicet ast Canal and Eastern Canals ivers a and Buxi Khal al an Canal	181-07	33,876		33,876		33,876 	674 78,994 4,09,281 89,416 4,464 34,268 120 6,11,317	1,257 82,288 2,80,677 90,422 395 39,380 9,569 5,12,988	Nil 29,757	186:49 112:57 68:57 111:19 8:84 114:91 7,974:17	Nil 1'82	217'48	114	187.08	 	187.08

supplied during the water-rates shown as assessed during the year are the amounts for which occupiers have rendered themselves liable in return for canal the year, and include some demands which were not legally recoverable, and others of which the assessment papers were not completed till after the steep.—Refunds of revenue have been deducted from "Gross assessed revenue from all sources."

STATEMENT OF QUANTITY AND VALUE OF CROPS IRRIGATED IN BENGAL DURING THE YEAR 1898-99. IIIE.

	ORISSA CANALS.	CANALS	MIDNAPORE CANAL.	E CANAL.	EDEN	EDEN CANAL.	SONE CANALS.	ANALS.	SARAN CANALS.	CANALS.	Te	TOTAL.
DESCRIPTION.	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.	Area irrigated.	Estimated value.
1	3	ဇာ	4	20	9	. 7	8	6	10	11	12	13
	Acres.	Rs.	Aores.	Rs.	Acres.	Rs.	Acres.	Rs.	Aores.	Rs.	Acres.	Rs.
	624	93,600	:	:	1489	91,450	132	12,248			69.364	1,11,023
٠.	6	360	: ;	: :	C#	001,120	21,681	4,95,560			21,690	4,95,92
Barley	193,679	69.72.444	74.901	10.34.046	99,129	14.99.575+	15,866	4,05,887			15,866	4,05,887
•				010110101								
Juar		:	:	:		:	::				•	
Oheena	,	150	•	:	:	:	18 791	280	7	ı.	18 797	7 10 070
(Gram	,	207	:	:	:	•	4.430	1.26.468	pəs	oeso	4.430	1.26.468
	:			: :		: :	3,252	36,585	cjo	olo	3,252	36,585
~	228	5,700	:		*:	:	11,025	3,28,816	910	916	11,253	3,34,516
crops .				:	:	:	49	999	Э М	эм	49	555
Fibres Cotton, &c.		3,150	•		:	:		1000	ala	sĮs	11 173	3,150
Dyes Indigo, &c.			•	:	•	:	1,172	29,270	u	ав	1,1/2	29,210
		•		:		•	1 201	01 01 5	C!	o	1 504	01 91
Opium, &c.			:	:	:	:	1,924	616,18			1,004	6.500
Drugs \ Print seed			:	:	:	:		080'0			•	0,00
Tobacco, o			:	•	:	:		:			•	:
fond			:	:	:	:	150	2,001			159	5 694
-			:	:	:		707	9,034			707	00,00
Oil-seeds Castor			•••	:	:	:	198	0 220	*		136	0 2 2 0 0
(Linseed, &c.		:	•••	:	:	:	100	100,120			2 (00	1 00 45
Miscellaneous			:::	:	:	:	260,7	1,22,456			260,1	1,52,400
Total	194,847	71,04,804	74,901	19,34,946	29,757	15,90,400	440,786	1,31,65,003		1	740,301	2,37,95,153
Hot-weather irrigation			:	:	:	:		:			:	
Land surreptitiously irrigated			:	:	:	:	:				•	
Garan Pour	194.8478	71.04.804	74.9018	19 34 946	757 66	15 90 400	440.7968	1.34.65,003			740.301	2,37,95,153

*458 acres of potato and 27 acres of onion; value Rs. 68,700 and Rs. 675, respectively.

† Includes price of straw at Rs. 5 per acre.

† Includes price of straw at Rs. 5 per acre.

† The area given luder * sugarcane area irrigated in all three seasons, that is, it is the value of this crop the rate has been taken at one third of the full value of an acre of crop.

As sugarcane is the only crop for which canal water is taken during the bot-weat! 3r, the irrigation during that season may be accepted with accuracy as the area of sugarcane irrigated as one crop. The areas irrigated in the several Divisions are given below:—

3,462 16,483 6,038 13,1 Total 141 131 Sone Eastern S Arrah Buxar

IVE.

COMPARATIVE STATEMENT OF IRRIGATION AND RAINFALL FOR THE YEARS 1898-99 AND 1897-98.

RAINFALL, INCHES.		1897-98, 1898-99,	4 2 15 16		51,175 58.66 53.73	69-23	1-20		29,248 47.62 63.62		1		1 3	55.06	53.49	55.49	53.49	63.49
		e Total.	14		35 51,			1-	1		1	194,847			1 1 3	1	1	194,847 4 46,019 4 44,459 5 201,760 1 148,658 8 50,318 8 440,796
ACRES.	1898-99.	Rabi, inclusive of hot- weather.	13			621	21 186 4.016		1	-	5.080	6,089			9 10	6 6 12	12 13 13	6 6 6 13 13 13 13 wals w
IRRIGATED IN A	4	Kharif.	12		51,140	73,750	22,211 2,995 10,624	160,720	860'63	189.758			39,125	39,125	39,125 36,365 136,794 92,494	39,125 36,365 136,794 92,494 229,288	39,125 36,365 136,794 92,494 229,288	39,125 36,365 136,794 92,494 229,288 304,778
AREA IRRIC		Total.	111		60,304	75,811	22,052 3,243 14,999	166,409	29,193	195,602	The state of the s		44,478	44,473	44,473 45,033 203,077 140,862	44,473 45,033 203,077 140,862 343,939	44,473 45,033 203,077 140,862 343,939 483,445	44,473 45,038 208,077 140,862 345,939 483,445 1,652
¥	1897-98.	Rabi, inclusive of hot- weather.	10.		48	1,683	65 247 4,932	6,975	40	7,015			6,988	6,988	6,988 9,716 70,024 47,658	6,988 9,716 70,024 47,656 117,680	6,988 9,716 70,024 47,656 117,680	6,988 9,716 70,024 47,656 117,680 134,384
		Kharif.	6		50,256	74,128	21,987 2,996 10,067	159,434	29,153	188,587	-		37,485	37,485	37,485 35,317 133,053 93,206	37,486 35,317 133,053 93,206 226,259	37,485 35,317 133,063 93,206 226,259	37,485 35,317 133,053 93,206 226,259 299,061 1,187
Area at	mated as annually	the works the works specified in column 6.	∞.		73,810	107,360	33,440 10,000 38,500	263,110	40,640	303,750			166,405	166,405	166,405 142,635 329,527 377,833	166,405 142,635 329,527 377,883	166,405 142,635 329,527 377,883 707,360	166,405 142,635 329,527 377,833 707,860 1,016,400 30,000
Culturable	area com- manded by the irrigation	works in column 6, in acres.	7		172,336	212,650	48,815 10,000 70,000	613,800	67,500	671,300			170,857	170,857	170,857 146,450 483,089 553,906	170,857 146,450 483,089 553,906 1,036,995	170,857 146,450 483,089 553,906 1,036,995 1,354,303	170,857 146,450 483,089 553,906 1,036,995 1,354,303
WOKES SUFFEIING IERIGATION.		Лате.	9	ORISSA CANALS.	Taldanda Canal and branches.	X	H 5		High Level Canal, Range III.			SONE CANALS.	Patr	SONE CANALS. Patna Canal Ditto	SONE CANALS. Patna Canal Ditto Arrah Canal	SONE CANALS. Patna Canal Ditto Arrah Canal Buxar Canal	SONE CANALS. Patna Canal Ditto Arrah Canal Buxar Canal	SONE CANALS. Patna Canal Ditto Arrah Canal Buxar Canal
-		No.	10		IJ	=	田台		VI				Н	" # # :	1 II (III)	и п (Щ)	и п	и п (Щ)
Alskator.	Culturable Cultivated	area in acres.	4		rich G	1,357,990		1,357,990	9999	1,923,990			2,356,000	2,356,000	2,356,000	2,356,000 1,038,000 2,187,500 2,187,500	2,356,000 1,038,000 2,187,500 2,187,500 5,581,500	2,356,000 1,038,000 2,187,500 2,187,500 6,581,500 1,326,500
		-	3					:	ì	:			:					
5	Total area	in acres.	2			2,469,300		2,469,300	1,200,000	3,669,300	TO THE COURT OF THE PARTY OF TH		3,015,680	3,015,680	3,015,680 1,328,640 2,800,000	3,015,680 1,328,640 2,800,000 2,800,000	3,015,680 1,328,640 2,800,000 2,800,000 7,144,320	3,015,680 1,328,640 2,800,000 2,800,000 7,144,320 1,697,920
	Civil District		1	ORISSA CIRCLE.		Cuttaok		Total Cuttack district	Balasore	Total Orissa Circle		SONE CIRCLE.	SONE CIRCLE.	E CIRCLE.	E CIRCLE	E CIRCLE ad Shahabad d	ad Shahabad	ad ad ad Shahabad one Canals

IVE—concluded.

COMPARATIVE STATEMENT OF IRRIGATION AND RAINFALL FOR THE YEARS 1898-99 AND 1897-98—concluded.

den i Palesco		0.1000						ENTRE SEN		07/61/06/	REAL SECTION	
INCHES.		1898-99.	16		69-18	: :	:	:	72.14	40.04	,	
RAINFALL, INCHES.		1897-98.	15		65.32	:	i	::	62.88		1	1
		Total.	14		62,950	73,504	1,397	74,901	20,379	29.757	104,658	740,301
RES.	1898-99.	Rabi, inclusive of hot- weather,	13		4.160	4,160	:	4,160	441	739	4,899	146,006
AREA IRRIGATED IN ACRES.		Kharif.	12		62,950	69,344	1,397	70,741	19,938	29,018	99,759	594,295
REA IRRIC		Total,	п		64,002	71,474	732	72,206	18,077	24,487	96,693	727,293
Ψ.	1897-98.	Rabi, inclusive of hot- weather.	10		ı.	:	i.	1	520 327	847	847	142,611 727,293
		Kharif.	6		64,002	71,474	732	72,206	17,557	23,640	95,846	584,681
Area at	Bridge .	· E 8	80		65,000	73,000	2,000	75,000	35,000	60,000	135,000	1,485,150
Cultumble	area com- manded by	works in column 6, in acres.	7		98,000	123,200	7,200	130,400	65,010	100,000	230,400	2,206,002
WORKS SUPPLYING IRRIGATION.		Name,	9		2,111,500 1,869,100 { I Under Midnapore Weir Under Panskura Weir		Tidal Reaches, Ranges I and II.		TV Eden Canal			
Wor		No.	9		II }		H		Ν			
STRICT.	Culturable Cultivated	area in acres.	4		1,869,100	1,869,100	464,700	2,323,800	1,283,800 702,300	1,986,100	4,309,900	13,141,890
OF THE CIVIL DISTRICT.	Culturable	area in acres.	60		2,111,500	2,111,500	632,660	2,744,160 2,323,800	1 1		1	
Ов тн	F	in acres.	2		3,292,800	3,292,800	1,087,360	4,380,160	1,726,080	2,813,440	7,193,600	19,705,140
	CIVIL DISTRICT.		1	SOUTH-WESTERN OIRCLE.	Midnapore	Total Midnapore dis- trict.	Hooghly	Total Midnapore Canal.	Burdwan	Total Eden Canal	Total South-Western Circle.	GRAND TOTAL 19,705,140

No. IF.

STATEMENT SHOWING THE WATER-RATES PER ACRE IN FORCE ON CANALS IN BENGAL DURING 1898-99.

CANALS.	Rates.	Rates. Different sorts of leases and crops on which the water-rates are charged.		WA		RAT	RATES PER		
				Flow.			Lift.		
1	2	8		4			5		
		Long Leases.	R	s. A	. Р.	F	Rs.	А. Р	
		For water supplied on a long-term lease between the 16th June and 30th November	1	8	0	1	. 8		
	II	For a term of 7 years for each season. For water supplied on a provisional license for which a permit for a term of years is				1		5 0	
Onvest Clause	III	not subsequently issued Provided that the rate for leases, whether new or renewals, required for shorter terms than seven years in order to	3	0	0	3	0	0	
Orissa Canals	IV	Rule 7 (III), shall be charged Beali lands included in a long lease are	1	8	0	1	8	0	
		not exempted from assessment, but no charge will be made for water supplied to them in the <i>rabi</i> season, that is, up to 25th March.							
{		Low-lying lands included in leases for a term of years which require irrigation only in years of drought	0	8	0	0	8	0	
		Season leases.							
[I	For water supplied for irrigation of rice between the 16th of June and 30th of November							
	II	For water supplied for irrigation of dalwa	3	0	0	3	0	0	
		For water supplied for irrigation of cotton, tobacco, huldi, ginger, wheat, vegetables, indigo and garden produce	1	8	0	1	8	0	
	IV	For water supplied for irrigation of lin- seed, oil-seed and all pulses	1	8	0	1	8	0	
CHEDULE	V	For water supplied for irrigation of sugarcane	1	0	0	1	0	0	
	VI	For filling tank or for manufacturing purposes per 10,000 cubic feet of water-supply, also for filling tanks without authority or using water in an un-	5	0	0	5	0	0	
Signal State of the State of th	VII 1	authorized manner For water supplied for the irrigation of sugarcane between 1st April and 15th	1		0	1	0	0	
	VIII	When water can only be supplied for a part of the above season, for each	3			3	8	0	
		watering	1	5	0	1	5	0	

SOUTH-WESTERN CIRCLE.

For the Rice Crop.

For water supplied between 16th June and 30th November-whether by flow or lift-Rs. A. P.

For five-year leases For one-year lease or for water supplied on a provisional license for which a permit for a term of years is not subsequently issued Provided that the leases, whether new or renewals, required for shorter terms than five years in order to develop the system of blocks, shall be charged If water is available after the long leases have been irrigated, leases for a single watering may be given 0 8 0 per acre, the rate ...

1 8 0 per acre for each season.

3 0 0 per acre.

1 8 0 per acre.

MIDNAPORE CANAL.

For Winter Crops.

For supply of water, when available ... 2 8 0 per acre or per season.

For unauthorized use of canal water ... per acre or such

less rate as may be sanctioned by the Deputy Collector.

being payable in advance.

For supply of water for manufacturing or other purposes Re. 1 to be charged for each 10,000 cubic feet or part of 10,000 cubic feet supplied.

The same charge will be made if water is taken into a tank without authority, or used

in an unauthorized manner.

Tanks may be filled with canal water without charge wherever water can be made available without injury to the cultivation dependent on a canal under certain conditions noted in Rule 31.

			big	gha.	
1	I.—Long leases commencing from 1st June of the year in which they are executed				
	and extending for seven years, per season	0	5	0	
	and extending for seven years, per season II.—Season leases, <i>kharif</i> , per season III.—Single waterings outside the area com-	0	8	0	
EDEN 4	manded, each watering	0	4	0	
CANAL.	IV.—Season leases, rabi, sugarcane and potatoes				
	and other crops, per season Boro rice, onions, brinjals and other		0	0	
l	v.—Unauthorized irrigation—	0	8	0	
					or such lower
	Kharif season	1	0	0	rates as may
	Rabi season	2	0	0	rates as may be fixed by the

canal officer. For supply of water for manufacturing or other purposes Re. 1 to be charged for each 10,000 cubic feet or part of 10,000 cubic feet supplied.

The same rate will be made if water is taken into a tank without authority or used in an unauthorized manner.

SONE CIRCLE.

SONE CANALS.

The following schedules are in force with reference to all leases taken during the year 1896-97 and subsequently :-

SCHEDULE No. I. Leases for a term of years.

FOR WATER SUPPLIED BETWEEN THE 25TH	FLOW OR LIFT.				
OF JUNE OF ONE YEAR AND THE 25TH MARCH OF THE NEXT.	Rate per bigha.	Rate per tenth of a bigha.			
1	2	3			
For leases for seven years, all crops	Rs. A. P. 1 9 0	Rs. A P. 0 2 6			

Leases having a currency of seven years will be granted at the rate defined in this schedule until and including the year 1903.

Schedulb No. II. Season Leases (Kharif).

	FLOW OR LIPT.		
	Rate per bigha.	Rate per tenth of a bigha.	
1 to the second	2	3	
For water supplied between the 25th June and the 25th of October for all crops.	Rs. A. P. 2 3 0	Rs. A. P. 0 3 6	

Schedule No. III. Season Leases (Rabi).

	and safety distribution	FLOW.		LIFT.			
TIME OF SUPPLY.	Locality.	Per bigha.	Per tenth of a bigha.	Per bigha.	Per tenth of a bigha.		
1 :	2	3	4	5	6		
15th October to 25th March. 25th October to 25th March.	Water supplied for all crops, including sugarcane from distributaries open for kharif irrigation. Water supplied for all crops including sugarcane from distributaries or parts of distributaries from which rabi irrigation only is allowed.	Rs. A. P. 1 4 0	Rs. A. P. 0 2 0	Rs. a. P. 0 15 0	0 1 6		

Schedule No. IV. Season Leases (Hot-weather).

and the second s	FLOW OR LIFT.			
and the property of the second	Per bigha	Per tenth of a bigha.		
1	8	8		
For water supplied between the 25th March and the 25th June, or at the option of the applicant, between the 25th of February and the 25th of May, for all crops. When water can only be supplied for a part of the season, for each watering.	Rs. A. P. 2 8 0	Rs. A. P. 0 4 0		

In the case of charges under Schedules I to IV, any smaller area than one-tenth of a bigha will be charged as one-tenth. The bigha contains 27,225 square feet.

2154 SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER, 22 1899.

SCHEDULE No. V.

all a leading our contact

For water supplied by volume in the kharif season.

For water supplied between the 1st of September and the 31st of October, four rupees for a calculated discharge of one cubic foot per second for twelve hours. For less than a cubic foot per second or less than twelve hours, a proportionate charge shall be made, but a fraction of less than one-sixteenth shall be charged as one-sixteenth.

SCHEDULE No. VI.

For water supplied by volume to fill aharas.

For water supplied between the 1st November and the 25th of March, one rupee for a calculated discharge of one cubic foot per second for twelve hours. For less than a cubic foot per second or less than twelve hours, a proportionate charge shall be made, but a fraction of less than one-sixteenth shall be charged as one-sixteenth.

APPENDIX I.

ORISSA CIRCLE.

Statements showing the areas of Kharif irrigated on the Distributaries from the Orissa Canals with average discharge of season or of period of greatest demand and area per cubic foot per second on the same for the year 1898-99.

TALDANDA CANAL.

Distributa	RY.	Area of kharif.	Average discharge of season.	Area per cubic foot per second on average of season.	* Remarks
1		2	3	4	5
		Acres.	C. ft. per second.	A cers.	
No. 0		139	3.63	38	
Vo. 1	•••	788	14.98	53	
Vo. 1½		431	10.63	41	
lo. 2		692	11.93	58	
la. 3		999	14.00	71	
0. 4		730	5.47	133	
0. 5		646	12.03	54	
ub-distributary at So	mpur	146	2.18	67	
0. 6		1,608	12.73	127	
0. 7		603	6.65	16	
0. 8		1,771	15.10	117	
o. 9		898	13.92	65	
o. 10		488	6.25	78	
0. 11		1,071	10.37	103	
o. 12		5,321	48.33	110	
0. 13		1,447	13.32	109	
To	al	17,778	201.52	00	

MACHGONG CANAL.

				Acres.	C. ft. per second.	Acres.	
o. 1]	Distributary	with bran	ches	588	5.74	102	
10. 2	ditto	ditto		2,334	25.98	90	
Vo. 3	ditto	ditto		478	3.90	122	
0. 4	ditto	ditto	***	1,356	16-39	83	
lo. 5	ditto	ditto		1,131	13.64	83	
No. 6	ditto	ditto		2,032	18.08	112	
lo. 7	ditto	ditto		2,886	23.90	121	
lo. 8	ditto	ditto		2,359	24.62	108	
Vo. 9	ditto	ditto		1,298	9.80	132	
10. 10	ditto	ditto		7,473	68.54	109	
lo. 11	ditto	ditto		747	10.91	69	
No. 12 No. 13	ditto	ditto		775	10.35	75	
lo. 13	ditto	ditto		4,311	32.28	134	
10. 19	ditto	ditto		5,322	71.41	74	20.00
	T	otal		33,390	335.54	99	

KENDRAPARA CANAL.

No. 1 ditto ditto	K	ENDRAPARA	CANAL.		
Main Canal	Distributary.	mate area of kharif	discharge of 15 days' period of greatest demand— 1st to 15th September	cubic foot per second on 15 days' period of greatest	Remarks.
Main Canal	1	2	3	4	5 *
No. 0 Distributary, and branches 755 15.73 48 No. 1 ditto ditto 3,638 63.33 57 No. 2 ditto ditto 1,236 23.13 53 No. 3 ditto ditto 1,236 23.13 53 No. 3 ditto ditto 300 16.20 18 No. 4 ditto ditto 4,668 82.13 56 No. 4 ditto ditto 4,668 82.13 56 No. 5 ditto ditto 2,249 39.60 57 No. 5 ditto ditto 7,846 106.93 73 No. 6 ditto ditto 7,846 106.93 73 No. 7 ditto ditto 1,094 14.93 73 No. 8 ditto ditto 14,745 244.60 60 No. 9 ditto ditto 4,467 88.40 50 No. 10 ditto ditto 1,649 22.66 73 No. 11 ditto ditto 1,649 22.93 46 No. 12 ditto ditto 1,253 25.53 48 No. 13 ditto ditto 1,248 22.40 82 No. 15 ditto ditto 1,248 22.40 82 No. 16 ditto ditto 1,253 25.53 48 No. 17 ditto ditto 1,248 24.40 82 No. 18 ditto ditto 1,253 25.53 48 No. 19 ditto ditto 1,248 22.40 82 No. 10 ditto ditto 1,253 25.53 48 No. 15 ditto ditto 1,244 14.06 92 No. 16 ditto ditto 1,244 14.06 92 Total 51,379 863.21 60 Total 70 ditto ditto 1,244 14.06 92 Main Canal No. 12 ditto ditto 1,244 14.06 92 Main Canal No. 1 Distributary 336 6.40 60 No. 2 ditto 333 7.52 46 45 No. 3 ditto 2,233 4.89 49 No. 4 ditto 2,233 4.89 49 No. 5 ditto 1,242 6.18 20 No. 5 ditto 1,242 6.18 20 No. 6 ditto 1,242 6.18 20 No. 7 ditto 1.0 1.2 6.18 20 No. 6 ditto 1,242 6.18 20 No. 7 ditto 1.0 1.2 6.18 20 No. 6 ditto 1,242 6.18 20 No. 7 ditto 1.0 1.2 6.18 20 No. 6 ditto 1,242 6.18 20 No. 7 ditto 1.0 1.2 6.18 20 No. 6 ditto 1.0 1.2 6.18 20 No. 7 ditto 1.0 1.2 6.18 20 No. 6 ditto 1.0 1.2 6.18 20 No. 7 ditto 1.0 1.0 1.0 No. 6 ditto 1.0 1.0 1.0 No. 6 ditto 1.0 1.0 1.0 No. 7 ditto 1.0 1.0 No. 6 ditt		Acres.		Acres.	
Area of kharif irrigated. Area of kharif irrigated. Area of kharif irrigated. Area of greatest demand—25th September to 10th October 1898. Area per cubic foot per second on 15 days' period of greatest demand. Acres. C. ft. per second. Acres. Acre	No. 0 Distributary, and branches No. 1 ditto ditto No. 2 ditto ditto No. 3 ditto ditto No. 4 ditto ditto No. 4 ditto ditto No. 5 ditto ditto No. 5 ditto ditto No. 6 ditto ditto No. 6 ditto ditto No. 6 ditto ditto No. 7 ditto ditto No. 8 ditto ditto No. 9 ditto ditto No. 10 ditto ditto No. 11 ditto ditto No. 12 ditto ditto No. 13 ditto ditto No. 15 ditto ditto No. 16 ditto ditto No. 17 ditto ditto No. 18 ditto ditto No. 19 ditto ditto No. 10 ditto ditto No. 11 ditto ditto No. 12 ditto ditto No. 13 ditto ditto No. 15 ditto ditto No. 16 ditto ditto No. 17 ditto ditto No. 17 ditto ditto No. 18 ditto ditto No. 18 ditto ditto No. 18 ditto ditto No. 18 ditto ditto	755 3,638 539 1,236 300 4,668 308 2,249 450 7,846 88 1,094 14,745 4,467 695 1,649 1,063 1,253 1,846 486 611 1,294	15·73 63·33 14·26 23·13 16·20 82·13 6·40 39·60 8·00 106·93 1·73 14·93 244·60 88·40 13·60 22·66 22·93 25·53 22·40 8·80 4·26 14·06	48 57 39 58 18 56 48 57 56 73 51 78 60 50 44 73 46 48 82 55 143 92	No. 3½ the soil is very sandy, and there is great loss of water. Distributaries 15 to 18 are in lower levels, where a small supply is sufficient under normal condi-
Area of kharif irrigated. Area of kharif irrigated. Area of kharif irrigated. Area of greatest demand—25th September to 10th October 1898. Acres.		Gobri C	ANAL.		
Main Canal 1,070 14·12 76 The very low duties on Nos. 2 No. 1 Distributary 396 6·40 60 ties on Nos. 2 No. 2 ditto 544 12·88 42 4, 5, and7 indicates No. 3 ditto 233 4·89 49 cate the necessity No. 4 ditto 121 6·18 20 for regulation of outlets. No. 5 ditto 333 7·22 46 No. 6 ditto 636 9·00 70	Distributary.	kharif	discharge of 15 days' period of greatest demand— 25th Sep- tember to 10th Oc-	cubic foot per second on 15 days' period of greatest demand.	Remarks.
Main Canal 1,070 14·12 76 The very low duties on Nos. 2 No. 1 Distributary 396 6·40 60 ties on Nos. 2 No. 2 ditto 544 12·88 42 4, 5, and7 indicates No. 3 ditto 233 4·89 49 cate the necessity No. 4 ditto 121 6·18 20 for regulation of outlets. No. 5 ditto 333 7·22 46 No. 6 ditto 636 9·00 70	1	2	3	4	5
No. 6 ditto 636 9.00 70	No. 1 Distributary No. 2 ditto No. 3 ditto No. 4 ditto No. 5 ditto No. 7 ditto	1,070 396 544 233 121 142	14·12 6·40 12·88 4·89 6·18 6·15	. 76 60 42 49 20 23	The very low duties on Nos. 2, 4, 5, and7 indicate the necessity for regulation of outlets.
	No. 6 ditto	636	9.00	70	

GOBRI EXTENSION CANAL.

Distributary.	Average discharge — 25th September to 10th October 1898.	Area under lease.	Duty in acres during period of greatest demand, assuming whole area as irrigated.	Remarks.
	2	3	4	ð
Main Canal No. 1 Distributary No. 2 ditto No. 3 ditto	C. ft. per second. 8-14 3-56 6-65 6-38	Acres. 700 411 922 1,587	86 117 139 249	In this country there is in nor- mal years very little require- ment for canal water.

PATTAMUNDI CANAL.

						C. ft. per second.	Acres.		
No.	0	Distributary							
No.	1	ditto	***			40.00	1,807	45	The irrigation wa
210.	-	aitto	•••			11.00	473	43	assisted be-
No.	2	324						10	assisted by rain
No.	3	ditto	***			15.00	1,612	107	fall.
No.	C 6312 3	ditto				3.10	230	70	The duty will re-
No.	4	ditto				10.10	796	79	main irregular
No.	5	ditto				15.00	1,006	67	till outlets are
	6	ditto		100		1.00	114	114	properly adjust-
No.	7	ditto	***			28.82	1,714		ed to areas
No.	8	ditto				12.50	577	59	leased.
No.	9	ditto		16 1-		11.25	467	55	
No.	11	ditto				37.24	2,151	42	
No.		ditto				26.50	2,113	58	
No.	13	ditto				4.40		79	
No.	15	ditto				12.82	222	55	
					***	12 02	1,297	100	

	Distribut	ARY.		Area of kharif.	Average discharge of period of greatest demand.	Area per cubic foot per second on period of greatest demand.	Remarks.
	1			2	3	4	, 5
		ar ar v		Acres.	C. ft. per	Acres.	
					second.	112	Irrigation was as-
	al outlets			1,681 3,882	15·00 62·46	62	sisted by rainfall.
No. 1 I No. 2	Distributary ditto			970	11.59	84	The results re-
No. 3	ditto			1,512	20.69	73	corded are of
No. 4	ditto			639	4.99	128	little practical
No. 45	ditto		•••	1,171	15 62 11·52	75 131	value, and indi- cate that more
No. 5	ditto			1,507 287	2.84	101	method is re-
No. 5½	ditto			2,212	14.09	157	quired in the
No. 6 No. 7	ditto ditto			377	6.91	54	regulation of the
No. 74	ditto			1,750	19.62	89	supply.
No. $7\frac{1}{2}$	ditto			440	4.38	100 123	
No. 8	ditto			302 763	1.65 5.57	137	
No. 9	ditto		***	547	6.22	88	
No. 10 No. 11	ditto			949	8.87	107	
No. 12	ditto			1,022	13.01	78	
No. 13	ditto	•••	***	750	10.64	71 38	
No. 14	ditto			850 44	1.64	27	
No. 145 No. 15	ditto	•••		47	0.72	65	
No. 16	ditto			140	1.61	87	
No. 17	ditio			351	8.81	194	
	ľ	otal		22,193	263-67	84	
		I	ligh L	EVEL CAN	AL, RANGE I	I.	1
Main Ca	nal outlets			2,996	33.30	90	This shows outlets well adjusted.
	ין	Cotal		2,996	33:30	90	
	- 4	1	Iigh L	EVEL CAN.	AL, RANGE I	II.	4
Main Co	nal outlets			7,070	107.36	66	The regulation
	Distributary			1,178	14.34	82	appears to be better on thi
No. 3	ditto			8,757 5,027	125·54 87·59	70 57	canal than on
No. 4	ditto			4,236	46 41	91	the others
No. 5 No. 6	ditto ditto			1,057	18.47	57	though the duty
No. 7	ditto			1,516	25.06	60	from the main
		Total	.4.	28,841	424.77	68	too low.
-		-		Jajpur (CANAL.		
	Distrib	UTARY.	K	Area of kharif.	Average discharge of 15 days period of greatest demand 9th to 23r	per second on 15 days period of greatest	A CONTRACTOR OF THE STATE OF TH
- 7		5.0			July 1898	•	5
1		l	-/	2	3 // ft no	4	0
				Acres.	second.	Acres.	This shows be
No. 1		У	J.:.	7,111 3,643		47 48	regulation ou
No. 2	2	Total			226	47.5	lets and waste water.

SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899. 2159

APPENDIX II.

APPENDIX

SON

Working Statistics of Distributaries by Canal

EASTERN SOR

CANAL OR BRANCH,	mber of dis-	Name of distributary.	distri	rth of butary acted in	d full capacity	LENG	TH OF		BUTARI NG SEA		n, in	TRIBI	TARY Y	AYS DIS- WAS IN SEASON.	AVERA	GE DIS	CHARG
	Serial number tributaries.		mi	les.	Estimated full as designed.	Kh	arif.	Ra	bi.	Hot w	eather.	Kharif.	Rabi.	Hot weather,	Kharif,	Rabi,	Hot weath
1		8-		4	5		6		7		8	9	10	11	12	13	14
			м.	Ft.		M.	Ft.	м.	Ft.	м.	Ft.					DAU	DNAG
Eastern Main Canal.	1 2	Eastern Main Canal Manora Distributary	7 8	1,040 4,000	1,613 122	7 8	1,040 4,000	7 8	1,040 4,000	7 8	1,040 4,000	22 23	6 13	2 2	5°5 20°3	11:3	
		Total Eastern Main Canal	15	5,040		(M.)	3.1					Tota	l Easter	n Main Ca	nal	-	
			-				7F324					Mei	in duty,	Eastern M	lain Can	al	
Patna Canal	1 2 3 4 5 6 7 7 8 9 10 11 12 13 14 15 16 17 18 19	Tildiha Distributary Right Parallel Channel (A) Chanda Distributary Tuturki Right Parallel Channel (B) Tejpura Distributary Mali Kojhassa Right Parallel Channel (C) Emamganj Distributary Right Parallel Channel (D) Umra Distributary Right Parallel Channel (D) Umra Distributary Saidpur Sub ditto Mahomedpur Sub ditto Right Parallel Channel (E) Rampore Chouran Distributary Right Parallel Channel (E) Rampore Chouran Distributary Distributary Right Parallel Channel (F) Ayara Distributary Patna Canal outlets	3 10 8 7 5 26 26 27 6 4 8 8 8 1 1 6 2 2 6	3,900 1,800 2,718 400 1,400 2,100 2,700 2,950 2,950 1,320	24 32 126 66 7 31 141 156 25 121 5 126 44 3 3 37 22 21 46 	2 	3,900 1,800 2,718 29 2,700 9,640 2,950 2,900	3 	3,900 1,800 2,718 400 1,400 2,100 2,700 2,900 2,950 1,320	2 10 8 8 5 22 14 13 4 8 8 1 1 6 2 2 5 6 6 36	3,900 1,800 2,718 2,700 200 2,950 2,900 1,320	-		" 7 " 7 2 3	15.0 17.0 21.0 27.5 Daudnaga		
Patna Canal	1 2 3 4 5 5 6 6 7 7 8 9 10 11 11 11 15 166 117 18 119 20 21 22 22 23 24 25	Murkha Distributary Nagwa Sub-Distributary Parallel Channel, No. I Paliganj Distributary Chand-hose Sub-Distributary Tenglel Channel Durawan Distributary Jabarpore Channel Parallel Channel, No. IV Adampore Distributary Tengraila Parallel Channel, No. V Khajuri Distributary Fatehpur Dariapur Sub-Distributary Patna Distributary Manair Rewa Branch Right Parallel Channel, No. II Right Parallel Channel, No. III Patna Canal outlet Left Parallel Channel Left Parallel Channel	16 4 5 4 4 7 7 7 8 3 2 11 6 9 8 6	2,000 2,400 1,910 2,640 3,300 1,648 4,000 1,200 3,864 5,228 1,000 3,989 3,200 3,989 3,200 1,3989 3,200 1,3989 1,000 1,3989 1,000 1,398 1,000 1,0	78 26 137 92 45 99 32 215 81 32 215 81 324 131	9	2,400 2,640 3,300 2,640 4,000 1,200 2,640 2,640 3,978 2,847 3,966 253 440 2,640	17 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	2,000 2,400 3,300 1,648 4,000 1,200 5,228 1,000 3,978 2,847 1,325 440 106	2 6 6 7 16 8	2,646 2,400 1,200 2,640 3,200 2,640 253	62 	84 79 69 21 57 2 6 24 71 68 50 43 28	" 12 " 12	62 	13°0	
		To a constant	-											Patna Can	al (Bikru	am subd	ivision
			376	868									l Patna	Canal Patna Can	 al		1

II.

CIRCLE.

and Branches for the year 1898-99.

Division.

	dis-	FOR	HARGE	OF DISCI	BIC FOOT	PER CU	PREVIO	DUTY, 1	ORKING	W	BIC FOOT	RING DU	ACRES,	RRIGATED.	REAS I	POTAT.
Remarks.	number of tary.		1897-98		i dia	1896-97			1895-96		SR.	OF WAT				ULL
	Serial numb	Hot weather.	Rabi.	Kharif.	Hot weather.	Rabi.	Kharif.	Hot weather.	Rabi.	Kharif.	Hot weather.	Rabi.	Kharif.	Hot weather.	Rabi.	Kharif.
81	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15
							*			2000					SION.	BDIV
ritory Wordl	1 2	9 6	27 44	132 61	Nil ¹	37 113	70 61	Nil 3	713 68	105 81	12 56	25 13'6	114 87'0	23 72	50 154	627
		15	71	193	1	150	131	30	.81	_* 186	48	39	201	95	204	2,393
		7	. 35	96	1	75	65	80	40	93	24	19	100			
Soils, Kewal, Do, Do, Kewal and powra,	1 2 3 4	5 11 7	14 30 66 45	54 78 131 74	15 31 20 14	43 60 119 56	54 55 88 88	19 16 23 28	5 42 84 31	51 60 91 82	4 4 17 7	4 26 104 35	56 94 108 77	13 80 84 39	21 231 251 221	168 ,747 ,574 ,157 183 ,469 ,843
Kewal and sandy. First quarter kewal and	6	11 5	80 45	95 80	28 11	87 54	62 54	Nil	29 25	80 68	8 8	42 34	94 66	39 132	290 923	320 d 31
Powia and sandy.	8	4 {	61	82	20	85	45	Nil	33	61 84	8 5 8	78	60	40 52	848 85 266	,865 ,360 ,779
First half sandy and pow second half kewal and pow Sandy, Do. Do. Powra and kewal,	12 13 14 15	₁₁	46 71 77 141 20	74 82 56 58 66	2 17 90 10 8 Nil	76 87 127 61 82 9	45 43 40 37 63 55	13 16 9 4 42 11	21 62 19 27	57 63 73 46	13 5 17 6	39 69 72 129 33 29	58 53 59 87 61	65 15 67 18	8 548 316 245 123 53	,865 ,360 ,779 395 ,616 ,151 413 ,863 916
Sandy and powra, Ditto, Ditto,	16 17 18 19	26 16	10 52 25 66	54 97 96	25 16 22	52 50 69	58 65 81	32 19 33	79 6 42	59 60 99	25	78 26 72	74 81 111	125	313 143 611	,257 ,128 ,050
		140	855	1,231	329	967	933	278	549	1,034	129	870	1,208	775	5,496	,528
		10	58	77	22	60	58	20	34	69	9	54	75			
	1	(61	64	77	35	92	25	47	80	150	549	DIVIS 285 874
	3 4 5	28	129	112	63	139	58	21	- 33	97	7	61	61	18) 84 6	10 409 124	128 715 430
	6 7 8	32 {		109	122	80	78	50	45	117	42	72	78	167 167 107 235	20 147 149 429 140	308 939 602 409
	9 10 11 12	34	53	84	75	65	67	35	30	74	24	88	65	83 200 43	91 145 68	804 182 644
	13	53	39	107	55 23	89	82 72	39	25	98	9 21	23	68	251	431	83 48 87
	15 16 17 18 19	12 33 48	170 101 31 68	104 122 105 71 39	21 28 23 40	105 72 246 75	71 65 58 43	 68 25 17	46 75 34 30	86 88 61 40	2 34 16 19	31 24 42 39	96 77 74 48	176) 18 67 178 156 } 189 }	198 152 98 169 981 788	350 339 302 309 304 32 32 344 44 48 37 727 116 61 60 00 04
	2		36	69	2	34	63	50	46	86	18	38	65	105	227	103
		38 9 49 9	59 38 38	105 65 41	44 71 27	45 27 20	71 75 29	50 59	20 44 18	112 88 27	25 39 	30 45 10	72 51 23	174 116	151 183 20	79 44 91
		499	964	,220	684 1	,143	896 1	585	528	1,162	281 1	555	938	2,592	,823	71 5
		36	69	87	40	82	64	45	38	83	21	39	67			 -
		639	,819	3,451 1,	1,013	,110	1,829 2	813	,077,	2,196	410 2	,425	2,146	3,367 2	,319	9 11
		23	61	82	35	70	61	31	36	76	15	46	71			

Working statistics of Distributaries by Canals and Branches for the year 1898-99.

ARRAH DIVISION.

		увиляка.	1 5	1	ord kept of the amount of water ped at end of distribularies.	nos ooo.	I e	No		out ta bequ	the amount of water esond of distributaries.	lo 1q	q p	1000	но
-crdistal	ib b	Serial number of	30		- 888468F885H385488F						8 6 111 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	C. S. C. C.			
612 61845 S		Hot-weather,	83		102 511 512 513 38 56 56 56 56 56 56 56 56 56 56 56 56 56	714	1	43		111 34	Usni . 222.	::	1 5	1117	
DISCHARGE	1897-98.	Rabf.	88		68 68 68 68 68 68 68 68 68 68 68 68 68 6	1,118	1	8	8	25.58 .24	109 36 58 58 58 108 108 120 120	1 160	1 89		1
40		Kharif.	7.3	1	231 127 127 127 128 128 127 127 128 128 128 128 128 128 128 128 128 128	1,695	Ì	100		147	131 109 110 1106 1108 1123 1127 1188 40 189 189 189 189 184 184	9.964	184	1	1
BIC FOOT		Hot-weather.	28		\$2.27128.1128.142128.55 \$3.4470.881128.45 \$3.4470.881128.45	262	1	333		138	8 9 2822 288	514	40	-	1
ACRES PER CUBIC POOT PREVIOUS THREE YEARS	1896-97.	Kabi.	25		2008 8 25 8 4 5 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	723	1	43		28 28 21 1	188 160 161 188 188 160 160 188 188 188 188 188 188 188 188 188 18	1.878	80	1	Ţ
PREVIOU	1	Kharif.	24		12008882812888884844	986	1	20	8	11 25392	28 28 28 28 28 28 28 28 28 28 28 28 28 2	1.300	1	1	1
FOR 1	-	Hot-weather.	23	1	8222 1. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.	670	1	96	i	111 2888	: 1:1° : 8 : 5 : 5 : 5	306	86	1	1
ORKING 1	1895-96.	Rabi.	23	1	20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	929	1	8	9	12 12 12 12 12 12 12 12 12 12 12 12 12 1	38 145 144 10 90 90 88 88 88 172	1,484	88	2,160	1 99
Wo	1	MadX	13		88 88 88 88 88 70 106 88 88 88 88 88 88 88 88 88 88 88 88 88	917	1	10	5	1 : 855 H	85 112 123 170 170 170 170 181 181	1,716	122	2,633	85
seres		Hot-weather.	20		65 27 27 27 28 28 28 28 28 28 28 28 28 28 28 28 28	770	107	*		11 2832	1 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	525	40	1,295	1 22
Working duty in s	charge.	Rabi.	61		108 116 116 116 116 116 116 116 116 116 11	928	100	3 1		102	25 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	108	42		19
Working	gip	Kharif.	18		176 1156 1108 1118 63 103 103 116 106 109 116 109 116 109	1,534	96	8		152 152 91 82 82 82 	109 80 121 125 127 134 134 136 136	826,1	107	894	103
-		Hot-weather.	17	N.	218 134 134 134 135 135 135 135 135 135 135 135 135 135	3,006		1	231 (133	291 142 1143 1166 50 50 50 88	1		5,897 3,	
Total areas freigated, Acres.		Rabi,	16	SUBDIVISION.	1,041 1980 1980 1980 607 10,044 28.23 24.8 24.8 24.8 25.23 24.8 25.23 24.8 25.23 24.8 25.23 24.8 25.23 24.8 25.23 24.8 25.23 25.23 26.8 27.7 1119 1119 1119 1119 1119 1119 1119 1	8,964 3,	vision	TOTAL TOTAL	1810N.	132 448 1,086 192 7	307 193 193 108 111 114 119 119 119 119	4,854	rision	1 1	Canal .
Total are		Kharif.	16	J SUBI	3.856 3.856 3.858 3.583 6.166 1.187 6.128 6.128 1.187 1.187 1.187 1.183	27,252	gani Subdivision		SUBDIVISION 1,376 370	1,146 2,639 5,640 1,456 115	2,065 11,543 2,195 11,226 979 11,406 817 637 637 1,514 1,515	1	aon Subdivision	55,365 1	y Arrah
		Hot-weather.	14	SRIGANJ	20000000000000000000000000000000000000	1	Nasri		GEAON 8-6	4-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6	ටෙනව : නන්නටුණුන් : ටෙනව : නොකනවණුන් :	:	uty Ageac	inal 5	ean dut
Average discharges utilized.		Rabi.	13	NA	200 - 200 -	Total Nasriganj Subdivision	Mean duty		4 -	0480000 0001-00	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	livision	P	0	M
Атега		Kharit.	12		21.9 15 8 6 8 5 8 6 8 4 8 8 74 24 10 3 25 10 3 25 10 3 27 25 10 3 28 12 4 18 18 1 14 14 1 discharges not	igan j Su	M		17.6	151 1776 61.6 177 3°0	20.5 20.5 20.5 10.3 6.1 16.4 8.5 8.5 10.3 10.3 10.3 10.3 10.3	Total Ageaon Subdivision		Total Arrah	
days	0.02	Hot-weather.	11		54 6 6 8 8 4 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	I Nasr			31		25 20.76 20.	al Age			
Number of days distributary was in flow during	eason,	Rabi.	10		95 95 95 95 95 95 95 95 95 95	Tota			2.0		0 - 20 - 20 - 20 - 20 - 20 - 20 - 20 -	Tot			
Num dist		.lirafA	0		87 57 77 80 80 80 80 80 80 80 80 80 80 80 80 80				98	5 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	558 11 15 15 15 15 15 15 15 15 15 15 15 15				
stri.		Hot-weather.	œ		The Cartiffe transfer						miles of #4 1 24 4 1 1 24 4 1 1 1 1 1 1 1 1 1 1 1				
try oper	dosn.	Rabi,	4		along assessment asses				***	, 6 kg 2 3 3 5	048425445004. 048452544				
Length of distri- butary open in miles during	-	Kharit.	9		TESTETSTEEN SESSE					1 2223	178488448844 100				
	200	Estimated fu designed.	10		288 288 288 288 288 288 288 288 288 288						68 68 68 68 68 68 68 68 68 68 68 68 68 6				
	saira	I III manauraa	4		TESTERNICATION OF SON TO				-	1 6 4 4 4 4	42244402400	111	15	20	
	Name of distributary		8		Raipur distributary Besainis sub-distributary Mungralia distributary Nasrigan distro Kaithi distro Sakla distro Distro do, Arrah Canal				11	tiery i i			1.	1	
distrib	lo u	Serial numbe	61		Tiestassilooovacossiloo										1
SECTION AND ADDRESS OF	CAMAL	TO BOOK TO SEE THE PARTY OF THE			Arrah Omnat				Arreh Canal	,	868348488				

The state of the s	No record kept of the amount of water escaped at end of distributation.	•	ord kept of the smount of water escaped at the	1.00
Many Many Many Many Many Many Many Many	24 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	_		
March Marc		31	88 44 45 45 45 45 45 45 45 45 45 45 45 45	789
Management of the control of the con	1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	70	11 Kants	975
March Marc	11.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2 1.2	2	147 165 165 165 1165 1165 1185 1184 1176 1176 1176 1176 1176 1176 1176 117	969
	: 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	s	# Y	04
March Marc	2	8	and the second	
March Marc	2010 100 100 100 100 100 100 100			1
	28 28 28 28 28 28 28 28 28 28 28 28 28 2	1	e availal	1
March Marc	156 156 156 156 156 156 156 156		gures no	1
Property of the control of the con	24 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 -		Çi.	1
March Marc	0000 00 -000000000000000000000000000000	wy	138 48 8 138 8 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1
Main Paralle Galler War State War	888 888 888 888 880 880 880 880 880 880		21 200000000000000000000000000000000000	
December 1985 1985	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		2 400-000	-
Direct allice Triple College Triple Tr			65 120 20 40 20 10 10 10	1
Difference of the country 1 1 1 1 1 1 1 1 1		TSTON.	*	anal
Difference Column	Maria Cara Cara Cara Cara Cara Cara Cara	SUBDIT	9 7970777	Branch 0
Below Particle Chart C	14.20 17.54		9 5555	Behea 1
Ditto ditto VII September Ditto ditto VII Ditto ditt	27.6 4.90 17.65 17.65 17.65 17.65 17.65 18.83 18.83 18.83 18.83 18.83 18.83 11.10 11.11 11.15 11	BAMD	88-4 11-0 144-1 144-1 144-1 14-1 16-1 16-1 16-1 1	ean duty
Below Branch Canal, 1 184	12.75 2.75 2.75 2.75 2.75 2.75 2.75 2.75		3.3.3.8.9.9.0.0.9.9.9.9.9.9.9.9.9.9.9.9.9.9.9	M
Below Branch Cant. 1 1 2 2 2 2 2 2 2 2	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		60 111 60	
Behon Branch Chame, 1 18 18 18 18 18 18 18	25 25 25 25 25 25 25 25 25 25 25 25 25 2		136 136 136 136 136 136 136 136 136 136	
1	F V Mare 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	-	- G	
Behon Branch Canal, 1 18 18 18 18 18 18 18	Salanda Angele and Ang	+	Harman Harman	
Second S		7	The last the second of the sec	
Bight of ditto III 24 295	* *	_		
Behea Branch Canal, 11 Behea Branch Canal, 12 Bitto, Ditto, ditto, VII Bitto, Ditto, ditto, VII Bitto, Ditto, ditto, VII Bitto, Ditto, ditto, VIII Behea Branch Canal, 11 Behea Branch Canal, 12 Bitto, Ditto, 22 Baroni distributary 22 Baroni distributary 34 Baroni distributary 35 Baroni distributary 37 Baroni distributary 38 Bar		-	H H H	
Been Branch Canal, 17 Bight Parallel Channel, 17 Bight Barach ditto 111 Beben Branch Canal, 17 Barach ditto 111 Beben Branch Canal, 17 Barach ditto 1				
Bebea Branch Canal, Bigath of ditto Bigath Parallel Channel Bigath Parallel Channel Bigath Parallel Channel Bigath of ditto Bitto, Ditto, Dit		_		
######################################	Ditto	Branch Canal,	Ditto, 3 Ditto, 6 Ditto, 6 Ditto, 6 Ditto, 6 Ditto, 6 Ditto, 7 Dit	
		Bebe	Righ Kant Sikra Kant Kant Kant Kant Kant Gara Gara Gara Chan Chan Chan Chan	
·4.	918 88 88 88 88 88 88 88 88 88 88 88 88 8		20040000000000000000000000000000000000	
			g.,	-

Working Statistics of Distributaries by Canal Buxu

	mber of distri-	Name of Distributary.	Leng	th of but ry acted in	I full capacity	LE	GTH OF		IBUTAI		N, IN	TRIBU	TARY V	AYS DIS- VAS IN SEASON.	Aver	GE DISC UTILISE	DHARG D.
	Serial nur butsry.			les.	Estimated full as designed.	Kh	arif.	R	abi.	Hot w	eather.	Kharif.	Rabi.	Hot weather.	Kharif.	Rabi.	Hwear
1	2	3		•	5		6		7	8		9	10	11	12	13	1
Main West- ern Canal.	1 2 3	Suliya Distributary Seanwank ditto Outlets in Main Western Canal	M. 3 18	Ft. 1,200 1,400	32 74	M. 3 8 In a le	Ft. 1,200 1,400 ength of	M. 3 8 7 mile	Ft. 1,200 1,400	M. 3 8	Ft. 1,200 1,400	50 56 45 Mea		39 21 kroul subo Sikroul su		6 17 14	SIKE
Ditto	4 5	Outlets in Main Western Canal Baraon Distributary	6 6	2,000	In a le	ength o	(33 mile	es 2,000 6) feet 2,000	3		Sugara .		16 21 r subdivis nrour subd		9 5 5	JAMR
Ditto	6 7 8 9	Outlets in Main Western Canal Batchari Distributary Khurmabad ditto Sasaram ditto	16 10 1 28	3,450 3,940 2,110 1,430	In a 187 121 35	length 8 10 1	of 5 mil	les 1,500 16 10 1	3,450 3,940	 		Mean d	uty, Ba fain We	an subdivi	odivision al	1 6 7 3 3	
	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 32 4 25 26 27 28 29 30 30 30 30 30 30 30 30 30 30 30 30 30	Buxar Canal outlets Jainagra Right Parallel Channel Ditto Left ditto Sisirta Left Parallel Channel Sirkhinda Right Parallel Channel Sirkhinda Right Parallel Channel Sirkhinda Right Parallel Channel Bhojpur Distributary Titrahand Link Line Sanjhauli Sub-Distributary Nenua Sub-Distributary Nenua Sub-Distributary Nenua Sub-Distributary Rampur Right Parallel Channel Bhanus Bhanus Banpur Right Parallel Channel Sarna Distributary Bampur Right Parallel Channel Ditto Left ditto Santh Distributary Chamilla ditto Amarpur ditto Natwar Right Parallel Channel Ditto Left ditto Gunsaij Right Parallel Channel Ditto Left ditto Gunsaij Right Parallel Channel Ditto Left ditto Basuli Distributary Sikroul Right Parallel Channel Basouli Distributary Sikroul Right Parallel Channel Butha Right Parallel Channel Ditto Left ditto Basudhar Distributary Mahadah Right Parallel Channel Larhi Distributary Mahadah ditto Jail Channel Saripur Parallel Channel	3 41 3 5 5 1 1 7 7 1 8 3 3 8 9 9 6 5 3 8 8 2 2 2 2 2 2 2 2 2 3 4 4 3 7 7	2,640 780 1,080 4,620 160 4,409 2,000 100 2,540 300 2,000 2,640 600 2,400 2,400 1,750 1,750 845 3,138 2,600 2,600	34 32 25 	22 23 31 41 35 51 11 11 18 83 32 22 18 96 53 33 22 18 32 22 23 24 24 24 24 24 24 24 24 24 24 24 24 24	nght of 2,640 (780 4,000 4,620 160 4,400 2,000 3,100 4,000 2,000 2,640	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	\$ 1,770 f 2,640 780 4,620 160 4,490 2,000 100 2,540 3,100 2,640 600 2,400 1,750 3,150 845 3,138 260 2,600	2 2 3 37 37 3 1	2,640 789 4,040 4,620 163,800 2,000 2,640 1,760 3,100 600 600 1,320 2,300 1,75	27 49 25 48 27 36 76 48 48 48 48 49 46 43 43 36 75 21 31 52	184 40 45 27 42 16 129 100 53 10 15 49 82 67 58 122 44 82 47 86 15 68 12 99 100 100 100 100 100 100 100	555 36 36 36 36 36 36 36 36 36 36 36 36 36	7 9 9 7 7 4 4 18 1933 1933 1933 1933 1933 1933 1933 1	1300 3 4 4 4 2 2 2 8 7 17 9 9 3 3 3 6 6 7 7 8 4 4 3 3 3 3 3 11 6 6 10 0 4 4 4 2 2 2 5 5 5 5 1 1	Leal Leal
Chowsa Branch.	1 2 8 4 5 6 7 8 9 10 11 12 13 14 15	Chowsa Branch Canal Gauri Shanker Tola P. Channel. Koenus Distributary Indore ditto Bhanpur divto Khiri ditto Unnas ditto Sisradh Sub-Distributary Hatwa Ditributary Hatwa Ditributary Rampur ditto Nagour Sub-Distributary Sonpa ditto Hakimpur Distributary Karahsi ditto	8 9 2 5 8	2,124 3,268 3,050 4,000 1,320 2,600 1,320 4,800 1,320 2,000	623 5 186 110 29 100 183 270 76 100 134 26 45 47 36	11 12 2 3 8 2 5	2,124 3,268 2,640 4,000 1,320 1,320 1,320 4,800 1,320 2,000	39 18 10 2 14 11 12 4 8 8 2 5 5 3 3	2,124 3,268 3,050 4,000 1,320 2,600 1,320 4,800 1,320 2,000	32	3,268 4,000	112 48 43 31 102 65 61 102 58 50 34 Total C	101 96 27 74 126 118 112 32 96	40	1 1 2 15 9 18 3 8 8 4 12 2	30 1 7 2 1 8 7 10 1 1 7 9 3	

and Branches for the year 1898-99.

DIVISION.

Tor	AL ARE	AS IRRI-	ACRES		BIC FOOT	ita	WORKIN	G DUTY,	N ACRES	PER CU	YEARS.	OF DIS	CHARGE	FOR	f dis-			
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468 ,551 604	7,089 778	1,812	26 102 16	78 81 45	33	30 66 10	30 89	22	36 72	61 97	60 33	90	14 81	48	6 7			
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295 ,105	163 246	52	59	82	26	2	132	13	53	47 248 109	34	140	18 13 63	24	11 12 13			
859 J	590 225 74	49 36	30 14 37	98 32 15	 5 12	365 54 60	69 15 16	9	60 22 34	141 34		88	18	31 8 2	14			
388 3,162 1,507 437 1,225 657 457	2,217 1,096 612	252 62	85 100 40	111 78 87	25	42	64 68 116	1	65	27 74 99	9 71	53 71 65	C 100	28	16 17 18			
	746 510 263	52 69 46	64 78 32	93 127 87	12	55 63 53	43	::	69 63 70	192 126 96	4	96 56	135 62 77	65 23 34 12	19 20 21			
,006	439 528	45	91	146	15	20	23 21	14	42	58 57	11 2	175	69 58	27 21	21 22 23 24			
,006 1,202 423 625 511 282 566 932 505	956	62 263 48 23	116	48 159 18	31 38	78	72	18	56 86	140	23	95 109	90	25 34	25 26 27			
511 282	234 224 65	77	57 85 70	58 112 32	26	32 29	20		58	23	₇	68	23	40	28			
932 605	355 591 353	69	55 58 72	118 118 39	9 23	18	32 186	=	14 54 55	73 79	3 5 13	34 / 107	12 80 186	12 8 17	30 31 32			
84	423 136 11	30 32	74	84 136	6 11	16 24	9	2	46	121 58 90	5	579 82	75 69 30	20 21	33 34 35			
_	3,684	4,180	2,094	2,574	343	1,651	1,448			3,708	625	9.744		685	36	San San		
			68	78	18	66	54	11	103	87	31	95	1,632	25				
DIVIS										i i i i i								
601	20	805 19	200 115	141 20	100	122	155	47	48 65	136	44	244	46 21	80 18	1 2			
195	801 295 76		195	115 147		65	140 104	:	50	151 180		92	152		3 4			
100	,039	20	193 174 184	76 174 148	***	54 87 31	141 83 101	=	113 129 137	137	=	180 230	55 126	20	6			
104 152	967 136 388		138 165	96 136		80 106	77 148	=	116 92	110 181 148		159 123 137	80 52		8 9			
92 2	,060 650 972	138	81 90 173	97 108 216	35	114	114 112	=	136 61 70	191 70 144	45	124	68		10			
40	139 133	=	70	97 134 66	Section 1	67	101	:	137 21	75	56	143 153 28	77	=	12 13 14			
B 500	,290	982	-	,776	174	ALC: UNKNOWN	1,368	47	1,325 1	,873	145	1,771	977	118	15		401.254	
	•		149	118	43	78	105	47	95	125	48	136	75	39				

SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899.

Working Statistics of Distributaries by Canala

事

CANAL OR	number of dis-	NAME OF DISTRIBUTARY.	distri	gth of butary acted in	d full capacity ned.	Lewe	OTH OF MILE	DISTRI 8, DU	BUTARI ING SEA	ES OPI	IN, IN	TRIB	UTARY	DAYS DIS- WAS IN SEASON.	Aver	AGE DIS	SCHARGE ED.
	Serial numb tributary.		m	iles.	Estimated as designe	Kh	arif.	R	abi,	Hot	weather.	Kharif,	Rabi.	Hot weather.	Kharif.	Rabi.	Hot weathe
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APPENDIX III.

Statement showing the Number of Days spent on Duty and on Tour by Superintending, Executive and Assistant Engineers and Upper Subordinates of the Irrigation Branch, during the year 1898-99.

and the first of the second state of the second sec	1.0	NUMBE	R OF DA	Ys-	Remarks.
NAME.	Circle or Division.	On dut	y. On	tour.	Tempero.
1	2	3		4	5
Superintending Engineers.			1		And the second s
Ar, J. H. Toogood D. B. Horn	Sone Circle South-Western Circle	36	35	W.	Was on furlough till 4th December 1898 and took over charge on the 5th. Was appointed Officiating Chief Engineer from 9th March 1899.
" K. H. Stephen	Ditto		71	97	Officiated as Superintending Engineer (1) during the all sence on furlough of Mr. Horn from 1st April to 4t December 1898, and (2) during the period Mr. Hor officiated as Chief Engineer from 9th March 1899.
W A Inclie	Orissa Circle	. 2	74	127	On privilege leave for three months, from 17th May to 15
" W. A. Inglis	Ditto		91	25	Officiated during the absence on privilege leave of the permanent incumbent. For the rest of the year in the
Executive Engineers.		9	274	103	Roads and Buildings Branch. On three months' privilege leave, from 26th April to 25
Mr. C. H. DeMello			106	28	July 1898. Officiated as Executive Engineer during the absence
., J. Zorab	. Do				Mr. DeMello. Fifteen days spent in acquiring knowled of divisional duties. For details, see under "Assista Engineers."
Drogad Sirear Sahib	. Do		13		Transferred to the 2nd Calcutta Division which he join
Rai Annoda Prosad Sirom			315	122	On leave for 26 days. Transferred to the Balayore Division of the Balay
" C. W. Sibold	Do Eastern Sone		50 277 88	139 16	On privilege leave for 88 days, from 7th April 1995. Held charge of the Division in addition to his duties Inspector of Works, Bihar Division.
H. H. Green	Gandar		365	135	On leave for six days, from 12th April 1898, preparatory his proceeding on furlough for 8 months and 15 da commencing from 18th idem, and on 11 days' subsidileave. Joined Brahmini-Byturni Division on 12th Janu
	1		365	232	1899. Was in charge of the Division for 354 days only.
" C. A. White	Balasore Do		365 24	152 5 147	On transfer to take charge of the Division. On privilege leave for 51 days, from 3rd May to 22nd J
, C. S. Smith	Nadia Rivers Northern Drains	age	96	35	1898. For remarks, see under "Superintending Engineers." two days held charge of the Division in addition
	and Embankment.		269	183	South-Western Circle. Officiated during the deputation of Mr. Stephen as Super
Rai Gopal Ch. Daw Sahib Mr. P. G. Jacobs	Circular and East	ern	268	71	On privilege leave for three motions, from five days.
J. Zorab	Canals. Ditto		95	30	
, J. W. Fox	Mahanadi		365 287	158 135	Transferred to the Northern Circle which he joined on
,, R. E. Carter	Brahmini-Byturni		78	21	January 1899.
" H. Barlow	Ditto		365	189	For details, see intital as against
Assistant Engineers.	Acquapada-Jajpur			000	from the first
Mr. E. Arundel Smith Babu Saroda Sundar Pal	Arrah Do	=	365 289	280 184	On privilege leave for 2 months and 25 April to 2nd July 1898.
"Triloke Nath Mr. C. W. Sibold	Do Buxar	=	14 315	19	On special duty. Engineer for 50 days durin
J. Zorab	Do		9 38	_1	7 American State of the Control of t
Babu Triloke Nath Rai Beni Madhab Mitter Sahib	Eastern Sone Ditto	=	316 271	24 22	On privilege leave for three months, from 16th Nor
Mr. E. Blaber	Ditto	-	110	* 6	1898 to 16th February 1899. On joining leave to 1655 Officiated as Executive Engineer (1) of the Arrah Officiated as Executive Engineer (1) of the Circular and Eastern (106 days), and (2) of the Circular and Eastern Division 95 days). Was in the Buxar Division for On privilege leave for 1 month and 14 days, from February 1899; and on joining leave for 4 days.
Babu Triloke Nath ,, Amar Nath Das Mr. G. T. Huntingford , C. Addams-Williams	Ditto Ditto Ditto Ditto Ditto	1111	185 365 66 6	1 1	33 Solution (1997) Solution (1
A A F Cowley	Cossye		30		26 whalivision for 335 days only.
, A. A. F. Cowley , R. C. Edge , A. A. F. Davis , G. T. Huntingford	Do Do Balasore	-	365 34 205		113 In charge of No. 4 (Contai) subdivision. 129 In charge of No. 4 (Contai) subdivision. 130 for three months, from 6th October 1898 to 5th to the
" Bishan Swarup	Mahanadi	-	24		for three months, to the state of the state

		Number of days-			THE REPORT OF THE PARTY OF THE
NAME.	Circle of Division.	On duty	On tour.		Remarks.
1 Charles Survey Broken	2 2	/ 3		4	5
Assistant Engineers-concld.		To the same			The same of the sa
r. W. S. Bremner abu Madhu Sudan Sen Gupta r. Bishan Swarup	Brahmini-Byturni Ditto Ditto	365 219 65		106	In charge of Kendupatna subdivision. In charge of Kendrapara subdivision. Employed in counting the stock of the Johra Workshop, from 30th November 1898 to 2nd February 1899. On privilege leave for three months, from 3rd February 1899.
abu Madbu Sudan Sen Gupta	Acquapada-Jajpur	89)		On special duty in connection with the survey of the Dudhai Channel, from 10th August to 6th November 1898. On privilege leave for 1 month and 27 days, from 7th November 1898.
Sub-Engineers. ai Satcowri Chatterjee Sahib	Eastern Sone	36	5		Honorary Assistant Engineer. Principal works lie at head-quarters.
. T Atkinson	Gandak	36		74	Principal works lie at head-quarters. Ditto ditto ditto. On leave for 42 days:
C. M. S. Rooke	Do	36	5	237 62	Facilities of the control of the con
Jadu Nath Bose Ir. G. Caw labu Kanti Chunder Banerjee	Do	36	5	60	Temporary Sub-Engineer. Joined 7th April 1898 and held charge of No. 4 (Monohar-
Ir. G. Caw Sabu Kanti Chunder Banerjee	Buxar	95	9	1	
, Gopal Chunder Ghose Rai Rakhal Das Chatterjea Sahib Babu Rakhal Das Roy	Cossye Nadia Rivers Ditto	27	5	146 110 120	In charge of No. 5 (Panskurah) subdivision. Held charge of No. 2 subdivision. Honorary Assistant Engineer. In charge of No. 5 subdivision. Was on privilege leave from 18th July to 13th October 1898.
dr. J. C. Coxe Rai Bama Charan Pramanic Bahadur	Service Control of the Control of th	. 21	331	299	Honorary Assistant Engineer. In charge of toll-office at Jangipur. Retired on 3rd November 1898. In charge of the Edilpore subdivision.
" Durga Charan Chuckerbutty Sahib	Northern Drainage an Embankment.		-00-1	736	Honorary Assistant Engineer. Held charge of the
" Gopal Ch. Daw Sahib	Titte		95	53	callibration ambidirigion for 91 days.
fr. J. W. Fox	Circular and Easter	n 30	65	180	Honorary Assistant Engineer. In charge of No. 2 sub-
Babu Dakshina Ranjan Mukerjee Ir. G. Hynes Bai Prasanna Coomar Pal Sahib	Ditto	3	98 65 65	195 156 210	In charge of No. 3 (Bhangore) subdivision. Supervisor of dredging plants. &c. In charge of the Janapur subdivision.
Supervisors.	Gandak		65	82	
fr. A. E. James	Ditto	. 3	65 9	320	On furlough for 1 year, from 10th April 1898.
" Mahendra Nath Sircar " Roma Nath Sircar	Occasion		65	113 234	In charge of No. 6 Gadghat) subdivision for 160 days only.
Mr. A. E. Hefferman Babu Suresh Chunder Ganguli Mohini Mohan Lahiri	Ditto .	3	39 65 65	145 128	In charge of No. 2 subdivision and workshop station building. Held charge of No. 3 subdivision for 122 days and Chandi-
, Rajendra Nath Mukerjee	. Ditto		77	56	On three months' privilege leave, from 15th Julie to 17th September 1898; and on joining and subsidiary leave for 2 weeks. Was in the Circular and Eastern Canals Division
		1	865	126	Nadia Rivers Division, from 3rd November 1836.
,, Akshoya Krishna Bose ,, Rajendra Nath Mukerjee Mr. A. E. Hefferman	Ditto Circular and Easter		25	5	In charge of the Jangipur toll-office, from 3rd November 1898. In charge of the Jangipur toll-office, from 3rd November 1898. Was in the Balasore Division for 339 days; and on joining; leave for 1 day.
The state of the s	Canals		365	365	To about of the Cuttack subdivision.
Babu Bankim Krishna Ghose .	Mahanadi Ditto		365 365	107 287	In charge of the Jagatsingpore subdivision. In charge of the Munijunga subdivision. In charge of the Munijunga subdivision.
Upendra Nath Mukerjee	Ditto	***	365 365	302	
1)	Brahmini-Byturni		106	67	On furlough for one year, from 10th December 1057 to 15th
					charge of the Kendrapara subdivision for 99 days. In charge of the Jobra Workshops subdivision. On leave
Mr. C. A. Marchant	Ditto		354	56	
	Acquapada-Jajpur Ditto		295 365	182 256	In charge of the Akhoyapada subdivision. In charge of the Jajpur subdivision.
Overseers.	Gandak		365	220	In charge of No. 4 (Basantpur) subdivision.
Babu Jagat Narain	Do	-	865 356	63 268	In charge of No. 5 (Basawan) subdivision. On leave for 9 days
" Satya Ranjan Khastgir	Ruxar Cossye		365	112	Sectional Officer.
" Surendra Nath Bhattacharya	Do	=	365	137 94	
" Mahit Kumar Chatterjee " Kedar Nath Mazumdar	Balasore		365 365	207 275	T Lawre of No 5 (Etamagra) Subdivision.
,, Mahendra Chandra Banerjee ,, Sarat Chandra Sur	Ditto Nadia Rivers		365	118	In charge of No. 0 (Ratha) subdivision
" Hari Mohan Bhaduri	Ditto	::	365 365	71 65	FINOL III CHARLES OF MAN
" Upendra Nath Dutt Hari Das Bhaduri	Northern Drainage Embankment.	and	365	269	a late in charge of any subdivision.
Aughore Chandra Chatterjee	Ditto Circular and Eas	tern	837	126	Not in charge of any subdivision. In charge of No. 4 (Assassuni) subdivision.
, Jogendra Nath Sen	Canals. Ditto		339	111	an the afternoon of 26th April 1895.
" Kshetra Nath Palit	Ditto		365	12	In charge of No. 5 (Pirojpur) subdivision.
, Rajendra Nath Mukerjee	Ditto	-	83		n Ditte ditte
, Hira Lal Sen Kalidhan Bhattacharya	Mahanadi Brahmini-Byturni		304 274	27	Held charge of No. 3 (Kendrapara) subd vision for 47 da.
			274	1 .	Not in charge of any subdivision.

APPENDIX IV.

Statement showing Inspections of Offices by Superintending and Executive Engineers during the year 1898-99.

Course of the State of the Stat		SIONAL FICES.		TISIONAL,	Art.
Name of Officer.	Number in circle.	Number inspected during the year.	Number in circle.	Number inspected during the year.	l m
1	. 2	8	4	ъ	- 6000 colonia
	102				4
Superintending Engineers.	100	10,000			I have been some own
Mr. J. H. Toogood, Sone Circle	5*	3t	23	3	• Inclusive of Revenue Divi
, B. B. Horn, , K. H. Stephen, South-Western Circle	6*	3†	26		† The officers of the Arrah and Sone Canals Revenue
, W. A. Inglis,		* 40		. (91) (1) (1)	Division and those of the Orissa and Balasore Divi- sions were not inspected by the Superintending Engi- neers during the year.
,, A. S. Thomson, Orissa Circle	4*	4	18	5	Besides these the Superintending Engineer inspected
Executive Engineers.	161				the offices of the 2 Dis- trict Engineers, Angul and Puri, 6 talukdars, and 4
Mr. C. H. DeMello,		0.66		out the	zilladars.
,, J. Zorab, Arrah Division			7	5	Besides these the Executive Engineers inspected 3 toll
,, G. C. Maconchy,		FI 6.		al. y	offices.
, C. W. Sibold, Buxar Division	۳.	-	5	8	Ditto 2 toll offices.
,, G. L. Searight, ,, T. Butler, Eastern Sone Division			6	2	Ditto 4 toll offices.
,, H. H. Green, Gandak Division			5	- Socialis	- 479.
H. Barlow, J. Lane Long	,		6	4	Ditto 8 toll offices.
C. A. White, Balasore Division		20,000		\$1 (a)	and the state of t
. O. S. Smith, Nadia Rivers Division		-	5 9	5	Ditto 9 toll offices.
, K. H. Stephen, Northern Drain-	-	-	6	6	Ditto 3 toll offices.
age and Em-		-,	4	4	Nil.
Daw. bankment Division. r. P. G. Jacobs,				-15 04	Contenue le presentation
J. W. Fox, Canals Division.	·	-		ed	Besides these the Executive Engineer inspected 2 tell
nativitidad (muranistra)				1000	offices at Dhappa and Chit- pur.
M. H. Arnott, Mahanadi Division R. E. Carter,	-	-	5.	4	Ditto 3 toll offices.
H. Barlow, Brahmini-Bytarni Division	-	-	4	2	Ditto 7 toll offices.
J. C. Hewitt, Acquapada-Jajpur Division	_		4	3	Ditto 3 toll offices.

List of Officers in charge of Irrigation Circles and Divisions during the year 1898-99.

Circle or Division.	Period of charge.		
1	2	9	

SECRETARIAT.

Secretary, Irrigati ment.	5010	Secretary of the second section of the second section is a second section of the second section of the second section is a second section of the section of the second section of the section of the second section of the section of the second section of the section	From 1st April 1898 to 8th March 1899. (On privilege leave from 9th March to 1st April 1899.)
Under-Secretary, Department.	Irrigation	Mr. D. B. Horn ,, T. H. Clowes*	Offg. from 9th March to 31st March 1899. From 1st April to 20th October 1898.
	ditto	" A. H. C. MacCarthy	" afternoon of 20th October 1898 to 31st March 1899.

^{*} Placed in charge of the current duties of Chief Engineer and Secretary during the absence on privilege leave of Col. A. D. McArthur, R.E., from 1st to Sth April 1898,

SUPERINTENDING ENGINEERS IN CHARGE OF CIRCLES.

South-Western Circ	le	Mr. K. H. Stephen		From 1st April 1898 to 4th December 1898, and from 9th March to
Ditto		" D. B. Horn		31st March 1899. ,, 5th December 1898 to 8th March
Sone Circle Orissa Circle	i deel 🏋	" J. H. Toogood " W. A. Inglis	Ξ	, 1st April 1898 to 31st March 1899, , 1st April to 16th May 1898 and 16th
Ditto	•••	" A. S. Thomson	knoler)	August 1898 to 31st March 1899.

EXECUTIVE ENGINEERS IN CHARGE OF DIVISIONS.

SOUTH-WESTERN CIRCLE.

Nadia Rivers Division	Mr. O S. Smith		From 1st April 1898 to 2nd May 5th 1898, and 22nd June 1898 to 31st March
Ditto Northern Drainage and Embankment Division.		::	1899. 3rd May 1898 to 21st June 1898. 1st April 1898 to 4th December 1898, and from 11th March to 31st March
Ditto	Mr. K. H. Stephen		,, 5th December 1898 to 10th March
Circular and Eastern Canals Division.	" P. G. Jacobs		1899. 1st April 1898 to 26th July 1898, and 1st November 1898 to 31st March 1899.
Ditto	" J. W. Fox		" 27th and 28th July 1898.
Ditto	" J. Zorab		" 29th July 1898 to 31st October 1898.
Cossye Division	" J. S. Lane Long		,, 12th April 1898 to 31st March 1899
Ditto	,, H. Barlow		, 1st to 11th April 1898.
Balasore Division	" C. A. White		" 1st April 1898 to 31st March 1899.

ORISSA CIRCLE.

Mahanadi Division Acquapada-Jajpur Division Brahmani-Baitarni Division Ditto ditto	Mr. M. H. Arnott " J. C. Hewitt " R. E. Carter " H. Barlow	•••	rom 1st April 1898 to 31st March 1899. " 1st April 1898 to 31st March 1899. " 1st April 1898 to 12th January 1899. 13th January 1899 to 31st March 1899.
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List of Officers in charge of Irrigation Circles and Divisions during the year 1898-99—concld.

Sone Circle.

Circle or Division.		Name of Officer.		Period of charge.		
1		2		8		
Arrah Division	•	Mr. C. H. DeMello		From 1st April 1898 to 25th April 1898, and from 26th July 1898 to 31st March 1899.		
Ditto Buxar Division		" J. Zorab " G. C. Maconchy	::	, 26th April 1898 to 25th July 1898. , 1st April 1898 to 25th November 1898, and 22nd December 1898 to 7th March 1899.		
Ditto		" C. W. Sibold		, 26th November 1898 to 21st Decem- ber 1898, and 8th to 31st March 1899.		
Eastern Sone Division	TOTAL	" G. L. Searight		"," 1st April 1898 to 6th April 1898, and from 4th July 1898 to 31st March 1899.		
Ditto Gandak Division	*	" T. Butler " H. H. Green	-	,, 7th April 1898 to 3rd July 1898, ,, 1st April 1898 to 31st March 1899.		

CANAL REVENUE OFFICERS.

	THE RESIDENCE OF THE PROPERTY	The state of the s
Deputy Collector, Revenue Division, Orissa Canals.	Babu Madhab Lal	From 1st April 1898 to 8th October 1898, and 21st Fovember 1898 to 31st
Ditto ditto		March 1899. 9th October 1898 to 20th November 1898.
Deputy Collector, Revenue Division, Midnapore Canals.	charii.	
Deputy Collector, Revenue Division, Sone Canals.	Maulvi S. M. Nasiruddin	" 1st April 1898 to 31st March 1899.
Supervisor, Calcutta Canals	Mr. W. R. Cooksey	" 1st April 1898 to 31st March 1899.

The Middle of the tendence of the second

RESOLUTION ON THE ANNUAL GENERAL ADMINISTRATION REPORT OF THE PRESIDENCY DIVISION FOR THE YEAR 1898-99.

GENERAL DEPARTMENT—(MISCELLANEOUS).

Darjeeling, the 14th November 1899.

RESOLUTION-No. 666T.-G.

READ-

The Annual General Administration Report of the Presidency Division for the year

Mr. C. E. Buckland, C.I.E., was in charge of the Presidency Division

throughout the year.

2. Tours and inspections.—The Commissioner was on tour for 103 days mostly in the rains, and inspected almost every office and institution of importance in his Division. The Collectors spent an adequate number of days on tour, and none of the Subdivisional Officers devoted less than 90 days to that work. The Collectorate and subdivisional head-quarter offices are reported to have been thoroughly inspected in all cases, except in the 24-Parganas and Murshidabad, in which districts it does not appear that the Subdivisional

Officers made formal inspections.

3. Weather and crops: Material condition of the people: Prices and wages: Public health .- The rainfall was full and well distributed. Consequently the crops were better than in the previous year. From Khulna a bumper crop of aman was reported, a normal one in the 24-Parganas and Jessore, and a fair one in the other two districts; and the divisional average of the other crops was better than those of the two preceding years. Consequently the prices of rice and other grains decreased; and as wages remained unaltered, the classes paid by wages were better off than before. The respectable middle classes, or bhadra lok, are reported to have shared but slightly in the general prosperity, as they spend more on living and are more extravagant on marriage ceremonies. The information is hardly consistent with other allegations that have been made as to the deterioration in the fortunes of this branch of the community. The Lieutenant-Governor cannot question the correctness of the Commissioner's observations, and so far as the Presidency Division is concerned, he does not doubt that peeple so enlightened will, if and when necessary, combine to retrieve their affairs by greater economy in their marriages. But, as he has before remarked, the real cure for the stagnation into which the class is falling, elsewhere at least, lies in the pursuit of other than clerical occupations. The agricultural class generally has fared well, and the utbandi asamis of Nadia are reported to have attained to as much prosperity as is possible for them. The large number of coolies employed in the various mills of the Division readily found employment; and as their numbers were to some extent kept down by the plague scare of the year, they were in a position to select their employers with a degree of freedom which was more suited to promote their personal convenience than to enhance the discipline of

The year was notable for the almost complete absence of epidemic disease; and though the registration of vital statistics is with reason believed to be incomplete, yet the view of the Commissioner appears to be correct that the lower registered death-rate represents a real decrease in the mortality in

comparison with previous years.

4. Manufactures: Trade and Commerce. - The jute industry appears to have been fairly profitable in the last year; but the cotton mills endured a period of stagnation which has not yet expired. The two paper mills of Titaghar and Kankinara still further increased their product. The value of the silk produce decreased from 31½ lakhs to 28 lakhs; but there is good ground for hoping that the measures now being taken to improve the rearing of silk-worms will check this decline. The report on the produce of sugar shows how seriously the increasing import of refined sugar had affected the factories of Jessore. Indigo will soon cease to be one of the important products of the Division.

The total number of factories is reported to have been 63; while the employés were 80,879 as compared with 80,983. Thus the absolute decrease was small; but the requirements of the year were greater; hence there was a real deficiency of labour due to a dread of plague.

The Lieutenant-Governor observes with regret that the manager of the sugar mill at Cossipore refused to furnish to the Commissioner the usual information about his factory. Several instances of this attitude on the part of manufacturers have recently been brought to the notice of the Lieutenant-Governor, who cannot but think that they must be due to some misunderstanding readily capable of removal if only set forth. These statistics are of the utmost importance to the community generally, forming the basis of the commercial legislation of the Imperial Government, and the Lieutenant-Governor considers that, in the absence of very powerful special reasons to the contrary, which could be communicated confidentially to the local authority, the information might always be given.

5. Civil Justice.—The number of civil suits instituted rose from 113,685 to 116,171, of which 53,071 and 55,773 respectively were rent suits. The increase was therefore almost entirely confined to that class of cases; and the Commissioner's explanation that it was due to the recovery of the loans advanced in

the scarcity appears to be scarcely correct.

The number of cases disposed of rose from 116,256 to 119,987. The pro-

portion of contested cases fell slightly to 17:3 per cent.

6. Crime: Criminal Justice: Police.—The number of cognizable cases fell from 22,734 to 20,833; but, as the Commissioner points out, the figures are still greatly in excess of those for 1895 and 1896, and the explanations of the District Magistrates should have been directed to the persistence of the increase over those years rather than the partial decrease. Of these 665 were declared to be false; prosecutions were instituted in 78 cases, and conviction followed in 31. These results may on the whole be considered fairly good, looking to the well-known difficulty of bringing home a charge under section 211, Indian Penal Code. Compensation was awarded under section 250, Criminal Procedure Code, in 144 cases as compared with 142 in the previous year. The proportion of cases in which inquiry into a complaint was refused by the police again fell considerably.

The number of persons sent up for trial was 15,250, of whom 10,363 were convicted. There were 43 murders, in 13 of which convictions were obtained; and the number of dacoities similarly fell from 49 to 36, out of which 22 were in the 24-Parganas. In 14 cases convictions were obtained, 10 being in the 24-Parganas. The cases of rioting decreased from 542 to 502, in 17 of which there was loss of life. The number of bad livelihood cases increased from 548 to 662, but it does not appear how many of these were tried locally. This

should be stated in future reports.

The number of non-cognizable offences rose from 18,596 to 19,978, an increase due partly, so it is said, to the increased prosperity of the people and partly to the fact that in the district of Khulna a large number of persons were prosecuted for disobeying summonse. As it appears that of 25,910 persons summoned only 16,809 appeared before the Magistrate, it would seem that much remains to be done to impress on people the necessity of complying with such

There were 203 cases tried by the Courts of Sessions, in 64 per cent. of which convictions resulted. There were 60 stipendiary and 42 honorary subordinate courts. The Honorary Magistrates empowered to sit alone are reported to have attended regularly; but such unfortunately cannot be said with regard to the others. The Lieutenant-Governor is glad to observe from the detailed statement appended that the Commissioner has already given much attention to this matter. The Honorary Magistrates decided 8,503 cases and the Stipendiary Magistrates 22,515. The detention of witnesses more than two days increased, and is reported to be a serious evil in the Courts of the Honorary Magistrates. Fines as punishments appear to have been imposed with due reference to the means of the convicts.

In the police the process of replacing Head-Constables by Sub-Inspectors continued. No very decided opinions are offered by the District

Magistrates on their conduct, but it is noted that the number of those dismissed appreciably increased, while the number of those punished departmentally rose from 246 to 669. Judicial punishments fell from 50 to 45. Resignations, it is observed, rose from 86 to 115. Less than 20 per cent. of the nominal stolen property was recovered by the police.

In chaukidari matters progress was made in substituting paid men for those remunerated by service tenures, in the organisation of the daffaduri system, and in the introduction of higher castes. It is observed that the amount of rewards paid to chaukidars was double that of previous years. It is stated that in the 24-Parganas an attempt is now being made to secure regular attendance at parades by rewarding punctual men rather than by constantly fining the unpunctual. This is a plan which will require to be worked very carefully it it is to succeed. There is a certain minimum of duties which a chaukidar must do, and in that minimum the first duty is the weekly attendance at the parade. His merits should be weighed in a liberal scale, but the distinction between merit and duty should be retained.

7. Land Revenue and Cesses.—The total demand of land revenue was Rs. 53,41,233 and the total collections Rs. 51,93,060, or 97.2 per cent. The collections were slightly better than last year, and the outstanding balance at the end of the year was less. The collections of the various districts, exhibited in percentages, are as follow:—

alte e salt e		TLY-SETTLED ATES.	Temporari esta	The state of the s	DIRECTLY MANAGEI		
da sering 1908 - 1918 - 1914 - 1914 A professor of the Seed Wash and the	Current.	Arrear.	Current.	Arrear.	Current.	Arrear.	
1	2	3	4	5	6	7	
Standard percentage 24-Parganas Nadia Murshidabad Jessore Khulna Calcutta	99 98·9 99·5 99·8 97·7 99·5	100 93·9 99·99 95 100 98·5	95 94 97·9 97·6 88 84·2	80·2 99·8 72·1 84·1 98·7	90 85·2 95 70·9 94·4 94·6 99·9	66·7 87·5 81·1 78 99·2 71·4	
Division	99.1	97:7	90 7	94.6	86	74	

The divisional percentage of collections of the current demand was above the standard, and the only districts in which it was short were Jessore and the 24-Parganas, in the latter of which however it only just failed to reach the standard. In the first district, however, the arrear collections were complete. It would appear that a large proportion of the arrears in Jessore are due from the deeply embarrassed Sridharpur estate, under the Court of Wards. The collections in temporarily-settled estates were poor, as regards current demands in Khulna, and as regards arrears in Jessore, Murshidabad, and the 24-Parganas, Explanation should have been given in all the above cases if any were forthcoming. In estates held direct by Government in the 24-Parganas, the collections both current and arrear were bad, and in Murshidabad they were not good. The arrear collections in Jessore were poor. It is understood that a change has been made in the method of collection in the Government khas mahals of Mursidabad and the 24-Parganas, and it is desired that the Commissioner will carefully watch the working of the new arrangements. Divisional averages of 86 and 74 per cent. for current and arrear collections in the khas mahals are not satisfactory in a year of admitted prosperity. The sums allotted for the improvement of Government estates in sanitation roads and education were spent save in Murshidabad, the principal work undertaken being the construction of the Orphanganj Market in the 24-Parganas. The raiyats of the khas mahals, with few exceptions, enjoyed a high degree of prosperity. In the

permanently-settled mahals relations between landlord and tenant were for the most part satisfactory. In the Sundarbans, however, it is reported that the lessees of waste lands, who pay 4 annas a bigha to Government, have so delegated their proprietary rights to a chain of under-tenants, that the actual cultivators, who are also the actual clearers, have to pay as much as Rs. 8 a bigha; and consequently the Board of Revenue has decided, on the recommendation of the Commissioner, to have a survey and settlement, with a recordof-rights, in those lots in which the evil has led to crime.

Of Rs. 8,986 received from raiyats as landlords' fees, only Rs. 410 were accepted by the landlords, probably owing to their reluctance to acknowledge the custom of unrestricted transfer.

The current demand for the road and public works cesses is over 9 lakhs, the collections 91 lakhs, and the arrears Rs. 133,000, or 14.7 per cent. The collections were good in Nadia, and poor in the 24-Parganas and Jessore. The poor arrear collections in Murshidabad should also receive the attention of the Collector. The appendix on the working of the Certificate Act has not been analysed by the Commissioner, though it is a branch of collectorate work to which great importance is attached. The number of cases for disposal in the year increased, in the 24-Parganas to 8,855, in Nadia to 2,559, in Jessore to 3,610, and in Khulna to 2,470 whilst they fell to 4,578 in Murshidabad In the 24-Parganas there were 3,160 pending at the close of the year. It is to be feared that the defaulters of the 24-Parganas are less unsophisticated than those of the other districts, as they waited much longer before paying. The best results were obtained in Murshidabad and Khulna, where the Act appears to have been vigorously enforced.

Wards and Trust Estates.—The release of the Bhawanipur estate in a good financial condition in February 1899 reduced the number of estates under the Court of Wards to two. The Syedpur estate, which supports the Mohsin Endowment Fund, is also managed by Government. The current demand of the whole of the estates was Rs. 5,83,609 and total collections Rs. 5,99,824, while remissions amounted to Rs. 3,15,050, of which nearly five sixths related to the Sridharpur estate. The balance at the close of the year stood at 9 lakhs as compared with the previous year's balance of Rs. 12,34,000. The surplus on the year's working was Rs. 38,595, and debts to the amount of Rs. 66,027

were paid off.

The Sridharpur estate appears to be in a bad condition; the collections decreased, and in consequence the Government revenue could not be paid. It appears, however, that since the close of the year radical measures have been taken to improve matters. Collections evere much better in the Syedpur estate, and all the customary demands wad easily met. Progress was also

made in clearing off the debts of the Satkhy cestate.

9. Excise, Stamps, and Income tax. —In the revenue obtained from excise the ground lost in the previous year was, owing chiefly to the good harvests, more than regained, and the total revenue was over 39 lakhs. The only important decrease was under the head of rum and imported spirits, a great falling off having occurred in Calcutta, for which no confident explanation has been offered. It is desired that this trade may be carefully watched. The greatly increased consumption of country arising the interest of the confident explanation of the greatly increased consumption of country arising the interest of the confident explanation and the greatly increased consumption of country arising the interest of the greatly increased consumption of country arising the interest of the greatly increased consumption of country arising the interest of the greatly increased consumption of country arising the great fall in the greatly increased consumption of country arising the great fall in the greatly increased consumption of the greatly increased increased consumption of country spirits is attributed to the return of prosperity. There was a large increase in the consumption of salt in the protected area, due partly to the vigilance of the staff, but chiefly to the prosperity of the people. A great decrease occurred in the sale of stamps, slight in Murshidabad, but amounting to Rs. 2,84,716 in Calcutta. The sale of non-judicial stamps decreased in all districts, which may be taken to mean that fewer mortgages were executed owing to the return of good crops. The falling off in Calcutta is attributed to the comparative dislocation of busine s which attended the plague scare. The number of prosecutions for breaches of the stamp laws fell off, but the number of cases in which insufficiently stamped documents were seized greatly increased, and the Lieutenant-Governor is glad to see that greater care is being exercised by Judicial officers in the examination of the documents filed before them. The amount of income tax collected was Rs. 24,73,760—an increase of 2.4 per cent. on the previous year. The gross demand increased by 3 per cent, of which almost all occurred in Calcutta. One lakh was not collected, but

in Murshidabad there were no arrears, and Nadia did well. Collections were worst in Calcutta.

Communications and Public Works .- The District Boards maintained 10. the existing roads, and also spent more money than in previous years on arboriculture. No new railways were made during the year; but the Ranaghat-Krishnagar light railway was completed, though it was opened after the close of the year. A retired embankment is being constructed at Bhagwangola in

Murshidabad, and will be completed this year.

11. Education.—The total number of pupils on the rolls at the end of the year was 201,828 (or, according to the returns in the appendix, 201,209) as compared with 201,177 in the previous year. The percentage of boys of a school-going age who were at school was 31.6. Little alteration occurred in their distribution between English, vernacular and classical schools. The most notable increase was in the number of pupils attending high English schools. There was a small decrease in the number of girl-pupils; and the vernacular schools also lost ground. The Koran schools apparently decreased by half, and lost the same proportion of scholars; while an alteration in the system of classification conceals the progress of the Sanskrit tols. The Muhammadan pupils achieved a greater measure of success in the public examinations, and their relative numbers did not decrease. The total expenditure aggregated over 11 lakhs.

12. Dispensaries and Hospitals.—The total number of these institutions which were open during the year was 69, though returns have been submitted of 66 The total income was Rs. 1,16,863, and the total number of patients treated was 333,673. The corresponding figures for last year were Rs. 1,43,933 and Rs. 3,48,792. There was thus a falling off in each respect, which the Commissioner attributes in part to the plague scares. No notable advance appears to have been made during the year. The Lieutenant-Governor would commend to the notice of the Municipalities and District Boards the action of the Mymensingh and other District Boards in appointing trained female medical officers for each subdivision, which he considers to be an excellent policy.

13. Local Self-Government. - Little that is new is to be said about the working of the various Boards. Judging from the attendance of members, it would seem that in several instances less interest was taken in the proceedings than in the previous year. The Lieutenant-Governor is pleased to see that the municipalities have made vigorous efforts to collect their taxes, and achieved much success, due to a great extent to the careful supervision of the Commissioner, which will, he knows, not be relaxed. Mr. Buckland has added little to the comprehensive general remarks on the Local Self-Government bodies contained in his report last year, and has seen no reason to modify the conclusions he then set forth.

14. Employment of Muhammadans. - The number holding ministerial appointments in the Division decreased by 4. There was an increase of 2 in the 24-Parganas, and a decrease of 1, 2 and 3, respectively, in Jessore, Khulna, and Nadia. In the two last-named districts the number has been lowered to less than 10 per cent., and is unduly small, and the same is still more the case in the 24-Parganas. The District Officers are requested to bear in mind the importance of encouraging Muhammadans, so far as regard to the efficiency of their

staff will permit.

15. Conduct of Zamindars. - Though the great majority of the zamindars of the Presidency Division are non-resident, and though several, by the inadequate remuneration which they give to their servants, tacitly connive at the acts of oppression of which the latter are frequently guilty, yet the Lieutenant-Governor is pleased to see the names of so many gentlemen in the list of those who, by their just treatment of the raiyats on their estates and their liberality in all public affairs, have augmented the esteem in which they were previously held. Nawab Bahadur of Murshidabad has long been conspicuous in the Province for those qualities; and the Maharaja of Kasimbazar is worthily following in the footsteps of his predecessor. The Dhankuria zamindars of Basirhat, the Mandals of Baruipur, Rai Hari Charan Chaudhuri of Nakipur, the Raja of Naldanga and others are said to have watched well over the interests of their tenants; and the Maharaja Bahadur of Nadia is reported to be a liberal landlord.

2178 SUPPLEMENT TO THE CALCUTTA GAZETTE, NOVEMBER 22, 1899.

Those zamindars who are reported to be directly, or through their agents, oppressive and unjust, thereby forfeit, in the eyes of Government, that title to consideration which they would otherwise enjoy.

The thanks of the Lieutenant-Governor are due to Mr. Buckland for the carefulness with which he has watched over the interests of the Division during the year, and for the complete report which he has presented, extracts from which are published for general information.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

Offg. Secy. to the Govt. of Bengal.

Extracts from the Annual General Administration Report of the Presidency Division for 1898-99.

III.-WEATHER AND CROPS.

The average rainfall in the Division was greater than in either of the two preceding years, being 65:3 inches against 61:4 inches in 1897-98 and 46:3 inches in 1896-97. The heaviest rainfall (97:04 inches) was at Mollahat in the Bagerhat subdivision of the district of Khulna, and the smallest (about 51 inches) at Barasat and Barrackpore in the 24 Parganas and Kushtia in Nadia. It was, on the whole, more favourable to the crops grown than in the two preceding years. In the 24 Parganas the average rainfall was less than in the previous year, being 56.7 inches against 59.8. The rainfall was evenly distributed throughout the district with the exception of the Diamond Harbour subdivision, where it was deficient in April and May, and also in September and October; otherwise the rainfall was sufficient during the ploughing and sowing seasons. The average rainfall recorded in Nadia was almost the same as in the previous year, viz., about 59 inches. It was seasonable and sufficient, except in August, when heavy showers caused the rivers to inundate considerable areas, and thus damage to a certain extent the bhadoi rice in thanas Gangni and Tehatta and the jute crop in the Ranaghat subdivision. In Murshidabad the rainfall was much greater than in the preceding year, being 72.5 inches against 51.1. There was a large flood which damaged the aus crops in the Bagri, though it increased the subsequent outturn of the rabi crops by fertilizing the land. In Jessore, 65.1 inches of rain fell during the year against 62.8 inches in 1897-98. The rainfall was largest in June, July, and August, and was generally favourable to the crops grown in the district. The average rainfall in Khulna was a little less than in the previous year, being 73.3 inches against 75. It was, however, equally distributed, and was favourable to the cultivation of aus and aman paddy.

Under the instructions conveyed in Government Orders No. 1T.-R., dated the 10th June 1898, the outturns of the different crops are shown in percentages for the past three years, 100 being taken to represent a normal crop, and the outturn for each year being stated as a percentage of that crop. The average outturn of aman, which is the staple food in the Division, was 101 per cent., against 100 in 1897-98 and 43 in 1896-97. The bhadoi or aus crop yielded an average outturn of 93 per cent., or 7 per cent. more than in 1897-98 and 38 more than in 1896-97. The jute crop was 87 per cent., against 84 in 1897-98 and 76 in 1896-97, and the rabi crops 90 per cent., against 84 in 1897-98 and 48 in 18-97. The other crops grown in the Division are of minor importance. Indigo is grown in Nadia, Murshidabad, and Jessore only. As compared with the previous year, the outturn or aman increased in Nadia and Khulna by 2 and 16 per cent., respectively, while in Murshidabad and Jessore it decreased by 3 and 12 per cent., respectively. In the 24-Parganas the outturn remained stationary. The outturn of aus was greater in all the districts except Murshidabad, where it fell off slightly.

IV .-- PUBLIC HEALTH.

14. The following statement compares the recorded mortality in the districts of this Division during the past three years:—

DISTRICT.	Nu	Number of deaths from fever,		Num	Number of deaths from cholera.		Number of deaths from other causes.			Total number of deaths from all causes.			- 000
to a class a plan	1896,	1897.	1898.	1896.	1897.	1898.	1896.	1897.	1898.	1896.	1897.	1898.	Average o
, 1	2	3	4	5	6	7	8	9	10	11	12	13	14
24-Parganas Nadia	37,919 41,×02 30,441 58,173 27,951	34,957 31,525 27,509 51,253 27,043	33,404 28,059 24,859 50,463 24,888	11,043 10,726 4,959 8,199 6,746	3,974 3,570 2,222 5,967 5,750	1,626 499 185 779 669	6,920 6,930 5,539 4,348 7,467	7,281 7,824 5,875 5,793 7,515	7,106 7,746 5,780 6,876 8,654	55.882 59,458 40,939 70,720 42,164	46,212 42,919 35,606 63,013 40,308	42,136 36,304 30,824 57,617 34,211	51,042 51,189 38,273 66,866 41,236
Ratio of double	190,286	172,287	161,673	41,673	21,483	2,758	31,204	34,288	35,661	269,163	228,058	201,092	248,610
mille of population	24.9	21*9	20.2	5.3	2.7	*4	3.9	4'3	4.2	34.5	29.03	25.8	31.7

The general health of the Division was distinctly better than that of the two preceding years. The total number of deaths recorded was 201,092 or 25.8 per mille of population, against 228,058 or 29.03 per mille in 1897 and 269,163 or 34.2 per mille in 1896. The number of deaths from fever was 161,672; from cholera 3,758, and from other causes 35,661, against 172,287; 21,483; and 34,288, respectively, in 1897. The decrease in mortality from fever and cholera is chiefly due to the absence of any of these diseases in a widely

epidemic form.

In the 24-Parganas the total number of deaths was 42,136, against 46,212 of the preceding year, showing a decrease of 4,076. Fever accounted for 33,404 deaths, against 34,957. As usual, the Diamond Harbour subdivision shows the lowest mortality from fever and Barasat the highest. The autumn and cold weather are the deadly seasons, December being the worst month of all. Efforts are being made to improve the drainage of Barasat, which has an evil notoriety for fever at present. The decrease in mortality from cholera was very marked, being 1,626, against 3,974 in 1897, or 59.08 per cent. lower than the mortality of the previous year. The subdivisions of Barasat and Diamond Harbour suffered most from this disease, which, however, nowhere assumed an epidemic form. Small-pox accounted for 100 deaths against 151 in 1897, and bowel-complaints 1.137 against 1,286. The mortality from other causes was 5,869, against 5,844 in the previous year. The number of cases vaccinated was 43,462, of which no less than 43,068 were successful.

The general health of the district of Nadia was exceptionally good, the total number of deaths being 36,304, against 42,919 in 1897. The mortality from fever fell from 31,525 to 28,059. The urban areas suffered more than the rural. There was, however, a virulent outbreak of malarial fever in some villages in the Khoksa outpost in the Kushtia subdivision after the subsidence of the floods, the death-rate in at least four of them being 100 per mille of the population. The months of March, April and November contributed most to the death-rate from fever. The decrease in mortality from cholera was remarkable, being 499, against 3,570 in 1897. The disease was present from the beginning of the year and reached its highest point in May. It then fell suddenly in June, and began to rise again in November. Small-pox was much more prevalent during the year, causing 277 deaths, against 87 in 1897. Deaths from this disease occurred most in March.

In Murshidabad the total number of deaths was 30,824, or 4,782 less

than in the previous year. Fever caused 24,859 deaths, against 27,509 in 1897, and cholera 185, against 2,222. Deaths from fever occurred most in the months from September to December. The comparative freedom from cholera is said to be due to the fact that rain fell nearly every month. villages suffered more than the towns, where two cases of deaths only were recorded. The total number of deaths from small-pox was 118, against 167

of the previous year.

The total number of leaths recorded in Jessore was 57,617, against 63,013 in 1897, of which fever contributed 50,463 deaths, against 51,253 in the preceding year. The largest number of deaths from this cause occurred from September to December. The subdivision of Magura suffered most and that of Bangaon least. Cholera accounted for 179 deaths, against 5,967 in 1897, and small-pox 57, against 70. The total number of deaths from bowel-complaints was 51 only, against 113 in the previous year. The mortality from all causes registered in Khulna was 34,211, against 40,308 in 1897. Fever accounted for 24,888 deaths, or 2,155 less than in the previous year. The mortality from cholera was remarkably low, being 669, against 5,750 in 1897. There was no epidemic of any description during the year. The number of deaths from other causes slightly increased, being 8,654, against 7,515 in the previous year.

15. Registration is worst in the municipal areas, where it is in the hands of the police. In these areas the reporting of births and deaths is legally incumbent on parents and friends under Act IV (B.C.) of 1873, and an endeavour is being made in the 24-Parganas to enforce the legal penalties, and thus induce an improvement. In rural areas the present arrangement is that village chaukiders keep a register of deaths and births, which is supposed to be tested by the police and the Vaccination Department. All that can be done is to reward or punish chaukidars in order to encourage or compel them to report. The police have little time for these duties, and the registers of the chaukidars practically remain unchecked. In Murshidabad Mr. Egerton has made it one of the duties of the dafadars recently appointed in the district to check all death and birth entries in their respective unions, and this, it is believed, will have a very good result on the registration of vital statistics so far as the rural areas are concerned.

V .- MATERIAL CONDITION OF THE PEOPLE.

16. The condition of the people during the past year showed an improvement over the year preceding. The crops were good, and the prices of food-grains ruled lower than they had done for some time. In the 24 Parganas there was ample employment for the labouring classes in the fields, on the roads under the District Board, and in the mills. The general prosperity was not, however, shared by the middle or bhadrolog class, whose incomes are stationary, while their style of living seems to be improving and their expenditure on marriages to be becoming more extravagant. This is of course largely owing to their own folly. The people in Nadia had already recovered from the effects of the famine before the close of the year 1897-98. During the year under review, their position has been further improved by excellent crops of all descriptions. Mr. Gait reports "the people are now as well off as they are ever likely to be so long as the utbandi system prevails and their present improvident habits continue." In Murshidebad owing to plenteous crops, low prices of food-grains, and the non-appearance of any disease of a virulent type, both the labouring and the agriculturist classes, which form the bulk of the population, passed the year in ease and comfort. Towards the middle of the year the people of parts of the district suffered from floods, and agricultural loans to a limited scale had to be advanced, but the injury done to the crops was soon after compensated by the abundant produce of the rabi crops on the lands inundated. The bulk of the population of Jessore are agriculturists, and their prosperity depends upon the outturn of the crops grown. The principal agricultural products of the district are aman, aus, jute, indigo, oilseeds, pulses, millets and tobacco. Sugar manufacture also plays an important part in the economic conditions of the district. It keeps about 50 per cent. of the population engaged from the middle of October to the middle of March. The Subdivisional Officer of Jhenida writes that the creation by the zamindars of numerous gantis and other undertenures is gradually reducing the prospects of actual cultivators, driving them to expensive litigation with the tenureholders, who try by every means to enhance the rents of raiyats' holdings. There is some force in these remarks, but the raivats of this district generally know their status according to the Tenancy Act, and contest, very often successfully, all attempts to enhance their rents. The Subdivisional Officer of Narail mentions in proof of the improved condition of the people the fact that the agricultural leans granted by Government in the previous year were fully recovered during the year. The import during the year of a large quantity of European piece goods (valued at about $2\frac{1}{2}$ lakks of rupees, against $\frac{1}{2}$ lakk of 1897-98) also affords an unmistakeable evidence of the fact that the people had money to spend on luxuries. The people of Khulna are, on the whole, better off than those fiving in districts further west or north. Labour is dearer, and signs of luxury are to be seen here and there. The district has wonderful recuperative powers. The people are, however, lazy and short-sighted: they will not do any disagreeable work such as harvesting of paddy, etc.) themselves, and annually there is a large incursion of labourers from outside at the time of sowing and reaping. The fishermen form a large class in this district, and are well off. Goldsmiths and silversmiths appear to be prospering, but, on the other hand, weavers as well as indigenous manufacturers are fast disappearing. Date sugar is manufactured in thanas Magura and Kalaroa, but it is steadily declining, owing to the importation of bounty-fed sugar.

VI .- EMIGRATION AND IMMIGRATION.

17. The number of emigrants registered in the district of the 24-Parganas during the year was 2,389, as compared with 3,709 in the year preceding. Of these, 507 were for the Colonies and 1,882 for the labour districts of Assam,

Carhar and Sylhet, as compared with 806 and 2,903 respectively in the year 1897-98. Of the total number of persons who emigrated during the year, only 4 belonged to this district and the rest to other districts. Besides these, it is stated that 24,913 coolies, as against 94,772 of the previous year, passed through the Barasat subdivision of this district on their way to Assam, Cachar and Sylhet, halting for a short time at the rest-houses at Naihati. This abnormal decrease is attributed to the better outturn of food-grains and the consequent reduction in the prices thereof.

During the year there were five rest-houses, of which one was burnt down. The remaining houses were provided with sleeping accommodation and separate cook-sheds, with an adequate number of latrines. The coolies during their stay in these rest-houses use the water of the river Hooghly for drinking and of tanks and wells for culinary and other purposes. The mehtars of the Naihati Municipality remove the nightsoil as before. There was a cooly cholera hospital in charge of the Civil Hospital Assistant throughout the year, who in addition to his other duties in connection with emigration treated the coolypatients. There were only ten cases of cholera, all of which recovered, and two cases of small-pox, both of which ended fatally. There was no outbreak of cholera, small pox, or fever in an epidemic form in any of these houses.

As usual up-country men and dhangars come to the subdivision of Barasat in large numbers for employment in mills, municipalities, or rural tracts. considerable number of Cabulis also go there to sell warm clothing and hill fruits, and many of these people have settled down in the vicinity of the mills, where they engage in money-lending. During the transplantation season, coolies from Midnapore and Orissa come to Diamond Harbour for employment, returning home after the harvest. It is reported that a number of Bunus from Chota Nagpur and its neighbourhood have settled down in the abads of

the Diamond Harbour subdivision.

As regards the other districts, there was no emigration or immigration properly so-called. As usual, during harvest time, the labourers from Nadia and Jessore left their districts for the Sundarbans and other Eastern Bengal districts, including Khulna, for work, but they returned as soon as their work was over. In Jessore some professional earth diggers came from Kushtia and Chuadanga subdivisions of the Nadia district for work, but their number was not large, presumably because they had sufficient work, on account of good crops in their own neighbourhood. Besides these Cabulis and other upcountry hawkers came to these districts as usual.

VII.—PRICES OF FOOD AND LABOUR.

Common rice is the staple food of the majority in this Division. The price of this rice, in the 24-Parganas at the beginning of the year, was 10 to 13 seers per rupee, and it fell but little until the new harvest was reaped. Towards the close of the year the price was from 12 to 16 seers, per rupee, against 13 to 13\frac{3}{4} seers per rupee of the previous year. This is due to the full harvest reaped during the year under report. Although there had been a fall in the price of common rice, as well as of other grains, in the district of Nadia, during the previous year, prices were still high at the beginning of the year under report, when the price of common rice was 12 seers 13 chitaks and gram 16 seers per rupee. In September, when a good bhadoi crop was harvested, the price of common rice came down to over 13 seers. It fell still lower when the aman crop was reaped in November; and the prices of wheat and gram also went down with that of common rice. In Murshidabad the price of wheat, common rice, and gram fell considerably during the year under report, as compared with either of the two preceding years. This is due chiefly to the good harvests of the year 1897-98, and partly to the good crops of the year 1898-99 which had been in the market for a few months only of the year under report. The average price of common rice in Jessore fell to 18\frac{4}{5} seers per rupee, from 12 seers in 1897-98 and 9\frac{3}{4} seers in 1896-97. The prices of other food grains were also easier. In Khulna the price of common rice was very low after the gathering of the new aman the price of common rice was very low after the gathering of the new aman crop, being 17 seers per rupee, against 13 seers 8 chitaks in 1897-98 and 10 seers 2\frac{3}{3} chitaks in 1896-97. This fall in price resulted from the plentiful harvests of rice was in 1897-98. harvests of rice crops in 1897-98 and 1898-99. Salt was sold somewhat

cheaper in Khulna and Satkhira during the year than in the two preceding

years At Bagernat the price remained stationary.

The wages of labour, both superior and common, in Nadia, Murshidabad, and Khulna remained almost the same as those of the preceding year. In the 24-Parganas the wages of superior and common masons and of superior carpenters and blacksmiths fell, while in Jessore the wages of superior and common carpenters and of superior blacksmiths rose. It is difficult to explain these fluctuations in the wages of labourers in the different districts of this Division. I think Mr. Hallifax is right when he says that these wages are governed more by custom than by the principle of demand and supply.

VIII.-MANUFACTURES AND MINES.

The principal articles of manufacture in this Division are cotton twist and yarn, gunny-bags and cloth, paper, ice, shellac and lac-dye, indigo, silk, sugar and molasses. Of these, cotton twist and yarn, gunny-bags and cloth, paper, ice, shellac and lac-dye were manufactured only in the district of the 24-Parganas, where there were 63 factories at work during the year. In 42 factories work was carried on by shifts and sets, and in 20 by midday stoppages, while one worked at contract rates, as reported last year. Three factories, namely, (1) Gillanders, Arbuthnot and Company's bulk-oil depôt at Budge-Budge, (2) the Chitpur Hydraulic Press, and (3) the Indian Patent Stone Works at Sealdah, were brought under the operation of the India Factories Act, XV of 1881, as amended by Act XI of 1891, and the revised rules made thereunder. Of these three mills, the bulk-oil depôt at Budge Budge was registered on the 23rd March 1898, and the last two, which were Budge was registered on the 23rd March 1898, and the last two, which were removed from the list some years ago, were re-entered in April and October 1898 respectively. The total number of operatives employed in the 63 1898 respectively. The total number of operatives employed in the 63 working factories during the year under report was 80,879, against 80,983 in the previous year. The slight decrease is attributed to the plague scare, which considerably affected the working of the factories in the early part of the year. There was no material change in the rates of wages paid to the operatives employed in factories during the year under report.

20. The following table shows the value of the outturn as returned by

the owners of the several mills and factories:

and the state of	The second	Outturn.	Laurit ran	z saeiwen e
ARTICLES.	1896-97.	1897-98.	1898-99.	REMARKS.
1 1 market	2	3 A 1 A	i faturi	MINTER VIEW 6.1 M.
LHVI: State of which	Rs.	Rs.	Rs.	walls to the
Gunny-bags and cloth Cotton twist and yarn Paper*	2,28,71,075 77,91,269 22,25,116 17,85,720	3,24,95.983 80,32,942 24,26,119	3,03,82,729 62,96,079 25,54,405	* The figures for these are for calendar years.
Leather* Silk*	14,800 55,341	13,57,178 17,550 1,91,806	10,85,601 18,589 1,66,175	Character in Alberta.

Indigo is largely manufactured in the districts of Nadia, Murshidabad and Jessore. The table below shows the state of this industry during the year under report as compared with the two preceding years:requirement without of the correct.

Drawn	Number of factories.			Produce.				e How		
DISTRICT.	1896-97.	1897-98.	1898-99.	1896-97,	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	REMARKS.
1	2	8	•	5	6	7	8	9.1	10	in in
53,02310				Mds.	Mds.	Mds.	Rs.	Rs.	Rs.	
Nadia Murshidabad Jessore	42 24 15	51 22* 18	47 22 11	2,797 1,626 1,256	2,432 2,026* 1,793	1,899 1,729 872	5,38,364 3,97,327 2,03,937	3,31,686 3,68,418* 2,35,422	2,42,740 2,61,604 1,13,157	anna buri Ludio
Total	81	91	80	5,679	6,251	4,500	11,39,628	9,35,526	6,17,501	

The discrepancy between these figures and those shown in paragraph 17 of last, year's report is due to the fact that some of the factories sent their statistics after the submission of last year's report.

There has been a considerable decrease during the year under report not only in the number of factories, but also in the gross outturn and value. The industry has of late been declining, the cause of depression being its competition with foreign chemical dye, which is steadily making progress.

26. The silk industry is chiefly carried on in the districts of the 24-Parganas and Murshidabad. The following table compares the state of this industry during the

last three years :-

DISTRICTS.	Nun	Number of factories.			Produce.		1 2 00 Edg	Value.	(a) - 40 - 97		
DISTRICTS.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99.	REMARKS	
1 000	2	3	4.	5	6	7	8	9	10	11	
24-Parganes Murshidabad	55	48	Informatic	lbs. on not avails 565,909	1bs, ble, 538,175	lbs. 406,658	Rs. 55,341 32,99,231	Rs. 1,91,808 29,73,715	Rs. 1,66,175 26,19,267	The figures are for the calend a r year.	

As noticed in the previous year's report, the manufacture of silk cloth at Mirzapur, in the district of Murshidabad, is gradually on the decline. The number of pieces of silk cloth manufactured during the year under report was 5,032, valued at Rs. 44,916, against 6,052 pieces, valued at Rs. 45,396 of the preceding year.

27. The table below compares the state of the sugar industry during the

DISTRICT.	Nun	ber of fact	ories.	Outturn.			Value.			
District.	1896-97	1897-98.	1898-99,	1896-97.	1897-98.	1898-99.	1896-97.	1897-98.	1898-99,	REMAR
. 1	2	3	•	5	6	7	8	9	10	1
24-Parganas Nadia Jessore Khulna	126 144 No	99 134 ot available	113	Mds. 46,664 Statist 2,36,150 25,700	Mds. 72,475 tics not avai 2,11,422 25,346	Mds. 43,240 lable. 1,76,068 23,721	Rs. 3,56,763 15,70,089 1,70,550	Rs. 5,24,175 14.82,323 2,04,220	Rs. 2,70,437 12,32,476 1,47,256	

As in the previous year, the Manager of the sugar mill at Cossipore has declined to furnish the necessary statistics. Sugar is still manufactured from sugarcane and date-juice by primitive native process in the sub-divisions of Basirhat and Barasat in the district of the 24-Parganas. In Nadia, sugarcane is largely cultivated in the Kushtia subdivision and in part of Chuadanga. In the Kushtia subdivision the sugarcane-crushing mill factory worked throughout the year, but information regarding this is not available. It is, however, known that the machines are distributed to local agents, who let them out on hire at a rupee or so a day. The principal centres of the date sugar industry in this district are Santipur, Chakdaha, Kishanganj, Daulatganj, Alamdanga, and Moheshganj, but no statistics are available. The refined sugar manufactories in the district of Jessore did not work during the year This industry has been steadily declining owing to the fall of under report. market caused by the importation of foreign sugar. But it is hoped that the new countervailing duties imposed on bounty fed sugar imported into the country will facilitate the production of home-made sugar. The brass foundry at Moheshganj in the district of Nadia manufactured iron screws and other requisites for the indigo factories. Brass and bell-metal utensils are manufactured in Nadia and Murshidabad. These articles are sold in the local markets, as well as sent to Calcutta, Rajshahi, and other places. Locks and keys in imitation of Chubb's locks and of really good quality are made at Natagore in the Barasat subdivision of the 24-Parganas and at Jangipur in Murshidabad. Cotton cloth is manufactured in several places in the Division, but the industry is gradually falling off in consequence of the weavers being unable to compete against European imports. The manufacture of blankets is carried on in several places in the district of Murshidabad. Those manufactured at Aurangabed a milled in the Lagrange and in the bad, a village in the Jangipur subdivision, are of superior quality, each piece

being worth Rs. 7 to 8. The clay figures of Ghurni, a part of the Krishnagar town in the district of Nadia, are very much appreciated both here and abroad; they possess no little artistic merit, and are generally considered to be superior to those produced elsewhere in India. Earthen pots of Kaliganj thana, in the Satkhira subdivision of the district of Khulna, are noted for their black glaze, but their manufacture is decaying for want of sufficient encouragement. The other and minor manufactures of this Division are tobacco, mats, cutlery, boats, cart-wheels, ivory works, shell bracelets, pottery, ploughs and other ordinary wood-work. There are no mines in any of the districts of this Division.

IX.-TRADE AND COMMERCE.

28. In compiling the statistics of trade in this Division the instructions contained in the Government circulars No. 785, dated the 12th November 1898, and No. 1, dated the 12th January 1899, have been strictly followed. In this Division the traffic is carried on by rail, the Nadia rivers, and the Calcutta canals. The statistics of traffic carried by different means in each district have been shown in separate statements. Four other statements also are submitted showing the import and export traffic of the Division (excluding local traffic) and those to and from Calcutta These statements are submitted as appendices to this report. An amalgamated statement showing the traffic in this Division, excluding local traffic, is given below:—

	dogue Marine			IMPOR	rs.				EXPORTS.	3	
The state of the state of	ARTICLES.	By rail,	By Nadia Rivers.	By Canal,	Total.	Correspond- ing total for 1897-98.	By rail.	By Nadia Rivers.	By Canal.	Total.	Correspond ing total for 1897-98.
1	2	3	4	5	6	7	8	9	10	11	12
	Rice Paddy Wheat Gram and pulse Other food-grains Jute, raw Gunny-bags Linseed Mustard seed Tea, Indian Cotton, raw Silk, raw Bugar, refined Do, unrefined Tobacco, manufactured Do, unmanufactured Indigo Cotton piece-goods, in bales European, in boxes Cotton piece-goods, in bales	Mds. 1,50,237 5,02,402 4,405 20,322 7,149 8,96,486 51,090 69,650 48,387 199 94,674 2,458 17,220 53,825 1,144 29,976 61,14,052	Mds. 75,#16 26,908 1,318 5318 526 1,989 3,465 820 820 820 820 440 408 9,542 6,129	Mds. 50 13,990 517 92,580 2,375 970 3,945	Mds. 2,25,303 5,42,400 6,723 21,365 9,138 9,92,531 51,910 70,538 74,264 190 94,674 2,898 17,628 64,337 1,144 40,050 61 1,14,705	Mds. 4,82,499 6,64,023 9,937 76,356 9,502 13,78,832 34,502 43,657 93,535 1,27,133 68,729 3,736 16,592 51,269 55,341 28 1,08,226 1,334	Mds. 8,26,585 13,593 49,056 9,38,546 52,837 6,24,273 1,93,439 3,23,734 25,540 1 3,226 6,634 2,054 2,054 2,85,304 5 24,649 4,069 358	Mds. 4,096 2,057 10,490 1,87,166 4,045 55,797 1,59,742 1,093 270 4,052 175	Mds. 3,60,129 5,41,331 6,225 1,93,300 3,320 3,200 1,250 7,000 1,37,232 900	Md5- 11,90,810 5,56,981 59,546 11,31,937 6,882 8,73,370 1,93,454 3,86,826 60,634 9,324 4,476 6,634 9,324 4,26,588 5 25,724 4,069 368	Mds. 8,22,518 2,31,879 3,572 9,30,746 14,622 22,29,292 62,859 1,49,135 59,000 286 6,753 6,449 15,022 5,65,869 90 24,788 5,349
	Indian. Ditto in boxes Cotton twist and yarn, Euro-	1,053 25 25,463	-		1,0 6 3 25 25,4 6 3	1,210	4,592	6	=	4, 598	4,494
	Salt	13,817 4,01,377 18,447 1,91,88,045	49,109 1,087 35,982	84,404 19,290 54,484	13,317 5,34,890 38,824 1,92,78,511	20,734 18,651 5,91,118 88,112 1,70,45,403	55,982 2,067 15,77,893 57,459	45 195 76,116	34,550	55,982 2,102 16,12,638 1,33,575	7 25 44,679 3,484 17,40,730 1,05,658
L	Total	2,17,12,356	2,36,229	2,73,258	2,22,21,843	2,09,90,975	50,72,248	4,05,370	12,88,467	67,66,085	77,27,603

29. There was an increase in the import of linseed, cotton (raw), sugar (refined and unrefined), tobacco manufactured, indigo, cotton piece-goods, European (in bales), Indian cotton piece-goods (in boxes), European cotton twist and yarn, and coal and coke, while there was a decrease in the import of all other articles. As regards exports, there was a decrease in jute (raw), mustard seed, tea, Indian, cotton (raw), sugar (refined and unrefined), tobacco (manufactured), indigo, European cotton piece-goods (in bales and boxes), salt, and kerosine oil, while there was an increase in all the other articles. The decrease in the import traffic of rice, paddy, wheat, gram and pulse, and other food-grains, with a corresponding increase in export, may be attributed to the plentiful harvests of the year under report. In the two preceding years scarcity prevailed more or less throughout the Division, and it became necessary to import articles of food to meet the wants of the people. The decrease in the jute traffic may be explained as being due to the fact that after the famine, which preceded the year under review, the people sowed with food crops a larger area of land and set apart a comparatively smaller area to the cultivation and growth of jute. The outturn was therefore less,

and consequently there was a decrease in the trade. In sugar, both refined and unrefined, there was an increase in the import and a decrease in the export during the year, owing probably to the gradual displacement of the country-made sugar by foreign bounty-fed sugar. The decrease in the export of indigo year after year shows that the production of this valuable commodity in some of the districts of this Division is steadily declining. The increase in the import of European cotton piece-goods may be ascribed to the better condition of the people during the year. The decrease in the import of salt may be partly due to the establishment of a salt warehouse in the district of Backergunge, which formerly received its supply from Khulna, but now receives it direct. The large increase in the coal and coke traffic was due to the greater demand for these articles for steamer, railway, brick manufacturing and cooking purposes. The fluctuations in the export and import of other articles do not call for any special remarks.

30. The Collector of the 24-Parganas reports that, besides the 24 staples enumerated in the statements prescribed by Government, there are other articles, some of them important, in which traffic is carried on between his district and Calcutta along the undermentioned eleven main routes of the district, viz., (1) Kamardanga, (2) Behala, (3) Kowrapookur khal, (4) Kowrapookur road, (5) Garia, (6) Bon Hooghly, (7) Moti jhil, (8) Jingerpole, (9) Matiabrooz ghat, (10) Matiabrooz road, and (11) Nemak Manal ghat. Of these the principal articles are (1) lime and limestone, (2) fresh fruits, other than cocoanuts and betelnuts, (3) iron, (4) firewood, (5) bricks and tiles, (6) hides, and (7) spirits. The following table shows the imports and exports of these articles as registered along the abovementioned routes during the past two years:—

	Articles.	IMPORT FRO	M CALCUTTA.	EXPORT T	O CALCUTTA.
		1897.	1898.	1897.	1898.
	1	2	3	4	5
	to parameter	Mds.	Mds.	Mds.	Mds.
	Lime and limestone Fresh fruits other than cocoa	1,55,246	1,85,750	50,147	16,426
	nuts and betelnuts	1,77,175	2,04,138	6,85,511	7,72,860
	Iron	CHEST CONTRACTOR CONTR	43,494	21,855	4,617
	Firewood	3.2. L. L. C. & P. & Chin, N. S. & House, No. 3, No. 1988.	95,883	4,41,541	3,58,824
	Bricks and tiles	No.	No.	No.	No.
1		THE RESERVE OF THE PROPERTY OF	869,718	11,243,425	13,201,975
•	Hides	[40] A. M. M. D. S. S. M.	1,847	90,254	148,544
	Spirits	Rs. 28,596	Rs. 39,629	Rs. 56,371	Rs. 46,627

The Collector of Murshidabad states that the river traffic of his district was confined, as a rule, to a few months of the year during the rainy season. The figures given by him and incorporated in the divisional amalgamated statement, do not include the large import of rice, paddy and the rabi crops, such as wheat, gram, linseed and mustard seed, which are annually carried on by carts.

The Collector of Jessore has again invited attention to the necessity of opening out Muchikhali channel, which connects the Madhumati with the Navaganga. This channel remains silted up during the dry season greatly to the injury of the local trade.

injury of the local trade.

The Collector of Khulna reports that a good deal of import and export traffic of the district is carried on by country boats, but no statistics are procurable for want of registering stations. Fish, betelnuts and molasses are largely exported from this district in addition to the articles shown in the statements.

A divisional summary is given in the following table showing the export from the districts of the Presidency Division to Calcutta during the years 1897-98 and 1898-89:—

Number	ARTICLES.	1897-98.	1898-99.	REMARKS
1	2	3	4	5
198 67		Mds.	Mds.	
1	Rice	31,14,054	36,92,796	
2	Paddy	3,73,263	7,63,536	
2 3	Wheat	23,068	1,37,064	
4	Gram and pulse	13,04,727	15,58,435	
5	Other food-grains	11,146	63,327	
6	Jute, raw	38,66,985	19,02,727	
11.01	Complete State of the State of the Committee of the State	No.	No.	
7	Gunny-bags	6,649,989	10,092,134	
	estado compresso de la compresso de	Mds.	Mds.	
8	Linseed	311,998	6,58,923	
9	Mustard seed	81,106	73,181	
10	Tea, Indian	85	1	
11	Cotton, raw	29,688	20,784	
12	Silk, raw	7,363	14,653	
13	Sugar, refined	75,681	61,020	
14	Do, unrefined	5,31,528	5,03,935	10
- 15	Tobacco, manufactured	84,149	93,748	
16	Do., unmanufactured	71,118	7,821	The Section
. 17	Coal and coke	1,10,110	1,02,007	경우 있다면 생기로
18	Indigo	1,258	4,318	

31. The imports of various articles in the Presidency Division from Calcutta is shown in the following table for the two years 1897-98 and 1898-99:—

Number.	ARTICLES.	1897-98.	1898-99.	REMARKS.
1	2	-3	4	5
		Rs.	Rs.	
1	Cotton piece-goods, European	84,49,297	91,32,052	
2	Ditto, Indian	58,157 Mds.	55,877 Mds.	
3	Cotton twist, European	30,623	37,233	
4	Ditto, Indian	31,598	13,253	
5 6	Salt	8,00,300	8,43,266	
6	Kerosine oil	11,02,278 No.	11,23,233 No.	
7	Gunny-bags	1,094,112	1,783,107	

As Calcutta is the centre of trade, the explanation of fluctuations of the divisional trade, given in paragraph 29 of the report, applies to the Calcutta trade also.

XIII.-CRIME.

39. The number of cognizable offences reported in this Division during the year was 20,833, against 22,734 in 1897, showing a decrease of 1,901 cases. The decrease occurred in all the districts, and chiefly in burglary and theft cases. The Magistrates of the 24-Parganas and Khulna ascribe the decrease to better supervision over bad characters during the year, but it seems to me that the real explanation lies in the fact that the increase in the number of cases

in 1897 was abnormal and due to the distress that prevailed in that year, the number of cases for 1895 and 1896 being 16,758 and 17,363 respectively. The number of cases declared false in this Division was 665, as compared with 780 in the year preceding. Of these, 133 were in the 24-Parganas, 150 in Nadia, 98 in Murshidabad, 190 in Jessore, and 94 in Khulna, as compared with 158, 270, 106, 153 and 93, respectively, in the previous year. The Magistrate of Nadia reports that he has impressed upon all subordinate Magistrates the necessity of carefully satisfying themselves that the cases are really false before ordering them to be recorded as such. Prosecutions were instituted in 78 cases, or 11.7 per cent, against 5.1 per cent. in 1897. Of these, 11 were in the 24-Parganas, 22 in Nadia, 9 in Murshidabad, 14 in Jessore, and 22 in Khulna, as compared with 3, 8, 11, 6 and 12, respectively, in the year preceding The number of cases in which convictions were obtained was 3 in the 24-Parganas, 8 in Nadia, 3 in Murshidabad, 7 in Jessore and 10 in Khulna, against 1, 4, 2, 3 and 4, respectively, in 1897. It is satisfactory to note that the percentage of prosecutions in false cases increased from 5.1 to 11.7, but still I do not think that full use was made of the provisions of section 211 of the Indian Penal Code. Compensation under section 250 of the Criminal Procedure Code was given in 55 cases in the 24-Parganas, 37 in Nadia, 9 in Murshidabad, 26 in Jessore, and 17 in Khulna, against 48, 26, 24, 32 and 12 respectively, in the year preceding. With the exception of Jessore there was an increase in all the other preceding. With the exception of Jessore there was an increase more freely districts. The provisions of this section should, I think, have been more freely that he has drawn the attention of used. The Magistrate of Khulna reports that he has drawn the attention of all his subordinate Magistrates to this matter, and he hopes that better results will be obtained in the current year. The total number of cases in which the police abstained from making enquiry was 794, or 3.8 per cent., against 1,367, or 6.0 per cent., in 1897, showing a decrease of 573 cases. Of the total number of cases, 151 were in the 24-Parganas, 251 in Nadia, 99 in Murshidabad, 152 in Jessore and 141 in Khulna, against 327, 459, 235, 153 and 193, respectively, in the year preceding, showing a decrease in all the districts. The decrease may be due to a check placed on refusals to enquire in burglary cases. No case of abuse of the power under section 157, Criminal Procedure Code, came to light. The number of persons arrested during the year was 16,037, as compared with 16,017 in 1897. Of these, 15,250 were sent up for trial, against 14,933 and 10,368 were convicted, against 10,201 in the previous year, the percentage of convictions being 67.9, against 63.6 in the year preceding. Taking the districts separately, the percentage was 72.8 in the 24-Parganas, 67.3 in Nadia, 79.6 in Murshidabad, 56.6 in Jessore and 56.3 in Khulna, against 70.6, 68.5, 82.8, 55.5 and 59.9, respectively. The total number of true cases of murder reported in this Division was 43 against 60 in 1897. Of these 10 of murder reported in this Division was 43, against 60 in 1897. Of these, 10 were in the 24-Parganas, 5 in Nadia, 8 in Murshidabad, 8 in Jessore and 12 in Khulna, as compared with 14, 3, 15, 11 and 17, respectively. The number in which convictions were obtained was 2 in the 24-Parganas, 2 in Nadia, 1 in Murshidabad, 1 in Jessore and 7 in Khulna. The number of true cases of dacoity reported in this Division was 36, against 49 in 1897. Of these, 22 were in the 24-Parganas, 6 in Nadia, 4 in Murshidabad, 4 in Jessore and nil in Khulna, against 15, 6, 3, 18, and 7, respectively, in the preceding year, showing an increase in the districts of the 24-Parganas and Murshidabad, and a considerable decrease in Jessore and Khulna; the number of cases in Nadia remained constant. Out of 36 cases, convictions were obtained in 14 cases, against the same number in 1897. Of these, 10 were in the 24-Parganas, 1 in Nadia, 1 in Murshidabad and 2 in Jessore. The Magistrate of the 24-Parganas reports that, in spite of the conviction of a large number of offenders who were sentenced to transportation or to long terms of imprisonment, the number of dacoities in his district has increased. He observes that the neighbourhood of Calcutta, with its separate police administration, the large number of upcountry men employed in the districts (many of them of the worst character and fugitives from justice in their native districts), and the facilities of communication by rail and river, all combine to make the offence easy to perpetrate and difficult to detect. The number of cases of rioting in this Division was 502, as compared with 542 in the year preceding, showing a decrease of 40 cases. Of the 502 cases, 92 were in the 24-Parganas, 120 in Nadia, 40 in Murshidabad,

140 in Jessore and 110 in Khulna, against 111, 68, 49, 154 and 160, respectively, in the previous year, showing an increase in the district of Nadia and a decrease in all the other districts; the largest number of cases occurring in the district of Jessore. No explanation as to the increase in the number of rioting cases has been given by the Magistrate of Nadia. The decrease in the other districts may be attributed to vigorous precautions having been taken under sections 107 and 145 of the Criminal Procedure Code. Of the rioting cases, 2 in the 24-Parganas, 2 in Nadia, 7 in Jessore and 6 in Khulna ended in loss of life. There were no caste or religious disputes in any of the districts during the year. The number of cases instituted during the year, under sections 106 and 107 of the Criminal Procedure Code, was 527, against 467 in 1897, and the number of persons bound down was 1,917, against 1,362 in the year preceding, showing an increase of 555 persons. The number of cases of bad livelihood instituted during the year was 662, as compared with 548 in 1897. The number of cases in which conviction followed was 471, against 387 in the

year preceding, the percentage being 71.1, against 66.2 of the previous year.
40. The number of non-cognizable offences reported in this Division during the year was 19,978, as compared with 18,586 in the previous year, showing an increase of 1,392 cases, which occurred in all the districts except Jessore, but chiefly in the 24-Parganas, where it is said to be due to the increased number of cases instituted under the municipal laws. The Magistrate of Nadia ascribes the increase to the improved condition of the people, as in the previous year they had neither time nor the money to prosecute petty quarrels in the Courts. The increase in Khulna is reported to be due to a greater number of prosecutions for disobeying summons and to a large increase in the number of proceedings, under sections 107 and 145, Criminal Procedure Code. The other Magistrates have not submitted any explanation of the fluctuation. The number of cases in which the police were employed to make enquiries was 1,139, or 5.7 per cent., as compared with 798, or 4.2 per cent., in the preceding year. Of the 1,139 cases. 354 were in the 24-Parganas, 55 in Nadia, 4 in Murshidabad, 202 in Jessore and 524 in Khulna. The Magistrates of Jessore and Khulna report that the increase was due to a very large number of petitions to bind down persons to keep the peace and regarding disputes about immoveable property having been referred to the police for enquiry. Processes were issued against 25 910 persons, as compared with 20,369 in the previous year, and 16,809 persons actually appeared before Magistrates, against 14,877 in 1897. The increase may be attributed to the increase in the number of cases. The number of persons convicted was 8,647, or 51.4 per cent., as compared with 7,989, or 53.7 per cent. in the previous year.

XIV.-POLICE.

41. The table below shows the strength of the Police force in the several districts of this Division: -

District.	District Super- intendent of Police.	Assistant Super- intendent of Police.	Inspectors.	Sub- Inspectors.	European constables.	Head- constables.	Constables.	Town chau- kidars
1	2	3	outsia end	5	6	.7	/8	9
24-Parganas Nadia Murshidabad Jessore Khulna	1 1 1 1		6 5 4 5	62 44 40 41 30		123 49 58 37 37	1,008 524 589 394 288	132 109 97 29 49
Total	5	. n.1 dao	23	217	1	804	2,798	416
Total for 1897	6	en letter et e	23 m	206	2 00	311	2,758	416

In the 24-Parganas there was an increase of 1 Sub-Inspector and a decrease of 1 European constable, under Government order No. 1640J., dated the 18th March 1898. In Nadia there was an increase of 4 Sub-Inspectors and 10 constables, while there was a decrease of 3 head-constables only. The force in Murshidabad was increased by 3 Sub-Inspectors and 20 constables and reduced by 2 head-constables. In Jessore there was an increase of 1 Sub-Inspector and 10 constables. No explanation has been furnished by the District Officers concerned regarding these changes. In Khulna there was an increase of 2 Sub-Inspectors and a decrease of 2 head-constables, according to the recommendation of the Redistribution Committee. Besides the above, 1 Sub-Inspector and 3 constables were sanctioned for the Alaipur floating outpost in Khulna.

42. The following table shows the particulars of punishment of men and officers by dismissal or otherwise, as compared with those of the preceding year:—

	ner orst d	dentitie	Number punished.					
	Number dismissed.		Departm	entally.	Judicially.			
	1897.	1898.	1897.	1898.	1897.	1898.		
1	2	3	4	5	6	7		
Officers	2 69	8 90	64 182	282 387	l 49	45		
Total	71	98	246	669	5)	45		

It will appear that there was a considerable increase in the number of dismissals and of men departmentally punished during the year, while there was a decrease in the number punished judicially.

43. The following table shows the number rewarded during the year as compared with 1897:—

			1897.		1898
By promotion	100000000000000000000000000000000000000		2		5
By money rewards, good-con	duot stripes, &c.		444		215
ent dispession et et est	Total		446		220
V *	10001	•••		1	***

It is very unsatisfactory to notice that there was a large decrease in the number rewarded during the year. In the 24-Parganas 3 Inspectors, 10 Sub-Inspectors, 7 head-constables and 25 constables received rewards for good service in various cases. In Nadia, Babus Dina Nath Ghosh, Inspector, and Janoki Nath Bose, Sub-Inspector, were specially rewarded Rs. 200 and Rs. 100, respectively, for successfully working up the Malipota currency note forgery case and securing the conviction of most of the accused. They also received Rs. 32-0-6 and Rs. 12-13-0, respectively, from the Commissioner of Police, Calcutta, as rewards in connection with that case. In Murshidabad 6 Sub-Inspectors, 7 head-constables and 17 constables received special money rewards. The Magistrate of Jessore does not report on this head. In Khulna 4th grade Inspector, Babu Keshab Lal Guha, was awarded a gold watch and chain, valued at Rs. 323, for good service rendered in a case of robbery with double murder.

45. The following statement shows the number of rural police in the several districts of this Division, the number punished and the number rewarded :-

District.		District.		Number punished.	Number rewarded.	Amount of reward.
	1*	ort or M	2	3	4*	1000 5
24-Parganas Nadia Murshidabad Jessore Khulna		**************************************	3,359 3,503 3,441 3,704 2,890	1,241 1,341 540 1,159 1,219	139 986 51 501 280	Rs. 497 2,481 246 3,367 2,561
	Total	* :	16,397	5,500	1,957	9,152
Total f	or 1897	••••	16,692	4,731	752	4,176

There was a decrease in the total number of chaukidars as compared with 1897. The decrease occurred in all the districts, except Nadia and Khulna, but chiefly in Murshidabad. In this district there were 3,441 chaukidars, of whom 2,670 were under Act VI (B.C.) of 1870, and the rest held chakran lands. Active steps have been and are still being taken to replace chakran chaukidars in the Kandi subdivision by chaukidars under the Act. The progress made in this direction is as rapid as can be expected or is desirable, and Government

do not think it expedient to hurry on the changes too violently.

46. During the year under report there was an increase in the number of men punished, as compared with the year preceding, in all the districts except Nadia. The Magistrates of the 24-Parganas, Nadia and Khulna are against the imposition of unnecessary fines on these poorly paid officers. Mr. Allen has directed the attention of the District Superintendent of Police to the bad effect upon the morale of the force of so many punishments for trivial offences. It is stated that an attempt is now being made to secure regular attendance at parades by rewarding punctual men rather than by

constantly fining the unpunctual.

47. It is satisfactory to notice that the number of men rewarded increased during the year. In the 24-Parganas 72 chaukidars were paid money rewards, chiefly for regular attendance, and 67 were rewarded by judicial officers chiefly for good services in criminal, excise and salt cases. It is reported that more attention is now paid to this method of encouraging good work among the rural police. In Nadia 868 chaukidars were given Rs. 2 each for regular attendance. Both the District Magistrate and the District Superintendent of Police attended muster parades and encouraged chaukidars by offering rewards for good work of any kind. In Jessore the system of good conduct stripes started by Mr. Kilby, formerly District Superintendent of Police, has been kept up, and 27 chankidars now draw good conduct allowance of Re. 1 each a month on this system. The Magistrate of Khulna considers that too much liberality was shown in granting rewards, as Rs. 2,561, against Rs. 1,310 and Rs. 553 in the preceding two years were

paid during the year under report.

48. The attempt to enlist men of better castes for chaukidars was maintained in the districts of the 24-Parganas, Nadia and Jessore. In Nadia and Jessore 151 and 22 men of good castes were enlisted during the year. The Magistrate of the 24-Parganas has forbidden the enlistment of men of the lowest castes, viz., Kaoras and Muchis, as chaukidars, and is trying to improve the status by raising the pay to a minimum rate of Rs. 4 per mensem. None of the other district officers have made any remarks on this subject.

50. No instance of any chaukidar having been employed on menial duties in any of the districts came to notice during the year. There has been a considerable improvement in the system of payment of their wages. In the 24-Parganas there were 64 chaukidars in arrears of pay for six months and 96 for three months during the year, as against 70 and 412, respectively, in the preceding year. In Nadia one man was in arrear of pay for a period exceeding three months, when the year closed. In Jessore there were only 20 chaukidars, as against 447 in 1897, whose pay was in arrear at the end of the year. The Magistrates of Murshidabad and Khulna have made no remarks on this

head.

XV.-CRIMINAL JUSTICE.

51. Criminal justice is administered by the Courts of Sessions, Stipendiary Magistrates, Benches of Honorary Magistrates, and Honorary Magistrates sitting singly. The total number of cases tried by Courts of Sessions during

the year 1898 was 203, as compared with 259 in the year preceding. Of these, 130, or 64.03 per cent., ended in conviction, against 69.1 per cent. in 1897. Taking the districts separately, Nadia shows the highest percentage of convictions, being 70.3, and Jessore the lowest, being 58.4. As regards the other districts, the percentage was 67.1 in the 24-Parganas, 62.5 in Murshidabad, and 64.03 in Khulna, against 71.7, 76.0, and 69.1, respectively, in the previous year. Excepting Nadia, where the percentage of convictions was 62.8 last year, all the other districts show a deterioration in this respect. The total number of subordinate Stipendiary Magistrates in this Division at the close of the calendar year was 60, against 59 in the year preceding. Of these, 37 exercised first class, 17 second class, and 6 third class powers. The number of benches was 42, against 43 in the previous year. They were composed of 327 Honorary Magistrates, who were distributed as follows:-

District.	
24-Parganas 18	Magistrates.
Nadia 10	81
Murshidabad 4	32
Jessore 7	45.
Khulna 3	36
Total 42	
Total for 1897 43	400

52. During the year the number of benches decreased by one. This decrease was due to the abolition of the Diamond Harbour Independent Bench in the district of the 24-Parganas. Of these benches, 21 exercised 2nd class powers and the same number 3rd class powers. There was also a decrease during the year in the number of Honorary Magistrates. This decrease may be attributed to the fact that the vacancies caused by the resignation and removal from the list of the names of several practising pleaders who became disqualified under the provisions of section 557 of the new Criminal Procedure Code, were not all filled up. Besides the Bench Magistrates there were 36 Honorary Magistrates who were authorized to sit singly, viz., 10 in the 24-Parganas, 10 in Nadia, 11 in Murshidabad, and 5 in Jessore. Of the Honorary Magistrates authorized to sit singly, 2 exercised 1st class powers, 30 2nd class powers, and 4 3rd class powers. As reported last year, the attendance of the Honorary Magistrates authorized to sit singly was generally satisfactory, but those not so authorized were, with a few exceptions, unsatisfactory in this respect. The number of Honorary Magistrates who were warned to be more regular or who were called on to explain their irregularity, eame to 10 in the 24-Parganas, 17 in Nadia, 6 in Murshidabad, 7 in Jessore, and 15 in Khulna. Of the Honorary Magistrates in this Division, the following have been specially mentioned by the several Magistrates for their good work. Babu Ramoni Mohan Mullick of Meherpore in the district of Nadia, Babu Radhika Charan Sen and the late Babu Mukunda Lal Barman Bahadur of Berhampore, Babu Monmohan Singh of Jangipur, Babu Akhay Kumar Pain of Kandi, Rai Sitab Chand Nahor Bahadur, Rai Moni Lal Nahar Bahadur, Nawab Syad Zainulabdin Khan Bahadur and Hon'ble Raja Ranajit Singh Bahadur of Lalbagh, Kazi Serajul Huq, Babu Pran Krishna Chatterji, Babu Bisseswar Chakravarti, and Babu Umesh Chandra Das of Khulna. The Magistrates of the 4-Parganas and Jessore do not report on this head.

53. The following table shows the number of cases tried by Stipendiary Magistrates as well as by the several benches and Honorary Magistrates sitti

ing singly:— District.		ing were s	Decided by Magist	Stipendiary trates.		Honorary
		- A	1897.	1898.	1897.	1898.
24-Parganas	· · · · · · · · · · · · · · · · · · ·		13,848	13,462	4,106	3,867
Nadia		***	2,543	2,497	1,959	2,036
Murshidabad			1,414	1,735	1,413	1,304
Jessore		•••	3,226	2,791	1,402	855
Khulna			1,941	2,030	463	441
	Total	•••	22,972	22,515	9,343	8,503

54. There was a decrease in the number of cases decided by Stipendiary Magistrates in the districts of the 24-Parganas, Nadia and Jessore, while there was an increase in Murshidabad and Khulna, resulting in a decrease in the divisional total of 457 cases. There was also a falling off in the number of cases decided by Honorary Magistrates in all the districts except Nadia, where there was a slight increase. The Magistrate of Jessore, where the decrease was most marked under both the heads, explains that this was due to the absence of famine, to good harvests and to successful prosecutions of some bad characters during the year. The Magistrate of Khulna writes that he made over during the year under report a smaller number of cases to the Honorary Magistrates, as the cases tried by them are often unduly protracted.

55. The following table shows the results of trials as regards persons:-

District.	Persons put on trial.		Convicted.		Percentage of convictious.		REMARKS.
•	1897.	1898.	1897.	1898.	1897.	1898.	
1,	2	3	4	5	6	7	8
24-Parganas Nadia Murshidabad Jessore Khulna	21,207 5,869 3,512 7,680 4,004	21,094 5,946 3,905 5,278 4,730	15,977 3,577 2,467 4,232 2,390	16,050 3,602 2,490 2,741 3,031	73·3 60·9 70·2 56·1 59·7	76·08 60·5 63·7 51·9 64·08	
Total	42,372	40,953	28,643	27,914	67.6	68.1	All Lates Swage

It will appear from the above statement that there was an improvement in the percentage of convictions in the districts of the 24-Parganas and Khulna, while there was a falling off in all the other districts. It is noticeable that the percentage of convictions is gradually deteriorating in Jessore. It was 60.8 in 1896 and 56.1 in 1897, while it was only 51.9 in the year under report.

56. The table below shows the number of witnesses examined and detained for more than two days during the year as compared with the year preceding:—

DISTRICT.	Number of exam	[2] 전 전 경기 (프라마) 보면 (1) 전 (1) 전 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	Number detained for more than two days.		
na di manana kang beranggan di	1897.	1898.	1897.	1898.	
1.	2	3	4	5	
24-Parganas Nadia Murshidabad Jessore Khulna	24,553 12,199 9,980 16,566 13,209	27,686 12,558 9,472 14,416 13,883	2,484 1,515 660 703 587	3,573 1,263 789 478 673	
Total	76,507	78,015	5,949	6,776	

During the year the number of witnesses detained over two days shows an increase in the districts of the 24-Parganas, Murshidabad, and Khulna, while in the other two districts it shows a decrease, the result being that the Divisional percentage increased from 7.7 during 1897 to 8.6 in the year under report. The percentage of such detentions in stipendiary courts decreased from 6.3 in 1897 to 5.8, but before Honorary Magistrates it increased from 13.2 to 21.5. The results were worst in the case of Stipendiary Magistrates

at Basirhat, Babu Mahendra Nath Mukerji (87.2), Babus Dhonesh Chander Rai (22·1), and Hari Chaitanya Ghosh (33·2) at Sadar, Babu Haripada Ghosh (21·9) at Diamond Harbour, Captain Walker (26·6 and 25) at Dum-Dum and Barrackpore, Babu Shyama Charan Dutt (16·4) and Babu Jotindra Nath Gupta (24.1), in the district of the 24-Parganas; Babu Ashutosh Chatterjee at Kushtia (21.5). in the district of Nadia; Babu Jagadis Chandra Sen (29.1) and Mr. B. Allen (16.9) at Jhenida in Jessore, and Babu Sarat Chander Sen Gupta (31.48) at Bagerhat in Khulna. The figures show deterioration in the administration of criminal justice in this Division, as remarked last year, specially in the 24-Parganas, so far as the individual Magistrates named above are concerned; but, as has been remarked before, the divisional percentage has come down from 6.3 in 1897 to 5.8 in the year under report. The high percentage shown against Babu Mahendra Nath Mukerji. Subdivisional Officer of Basirhat, has not been particularly explained by the Collector, but it seems probable that this was owing to the Deputy Magistrate's having joined the subdivision in the last quarter of the year and having had to try cases de novo left unfinished by his predecessor. The Magistrate of Nadia does not think that the Magistrates were much to blame for the delays in the disposal of witnesses, as they were mostly cited in highly contested cases. The excellent results achieved by Babu Amrita Lal Mukherjee (1.6) at Barasat, Babu Chandra Nath Ghosh (1.4) at Jangipur, Babu Gati Krishna Neogi (nil) at Magura, Babu Jagat Bandhu Bhattacherjee (1.1) at Bongong, and Babu Krishna Babu Jagat Bandhu Bhattacherjee (1.1) at Bongong, and Babu Krishna Doyal Pramanick (*2) at Satkhira, where the criminal work was considerable, show what can be done by good management. As regards Honorary Magistrates, the following instances were especially unsatisfactory, the more so as the total number of witnesses examined was in several cases very small: 24-Parganas Sadar (46·3), Basirhat (34·4), Diamond Harbour (34·7), Barasat (20·6), Sealdah (28·7), Nadia Sadar (21·1), Meherpore (18·37), Kushtia (38·4), Kandi (27·2), and Jangipur (48·4). The Magistrate of Nadia reports that the detentions before Honorary Magistrates were greatest in the Kushtia subdivision, which he attributes partly to the failure on the part of Manlyi Muhammad sion, which he attributes partly to the failure on the part of Maulvi Muhammad Abdulla, the late Subdivisional Officer, to exercise proper supervision over the working of his subordinate Magistrates and partly to his having made over to them for trial cases of too complicated a nature. There was, it is said, a great improvement towards the close of the year, when Mr. Gruning was in charge of the Kushtia subdivision, and it is expected that far better results will be noticed during the current year. The other Magistrates have not explained the unsatisfactory state of things noticed.

57. The following statement shows the number of remands in A form cases during the year under review :-

	Numl	per	NUMBER POSTPONED-						1
DISTRICT.	disposed of on first day.	rst	Twice.	Three times.	Four times.	Five times.	Six times.	Over six times.	Number pending a the close of the yea
1	2	3	4	5	6	7	8	9	10
24-Parganas Nadia Murshidabad Jessore Khulna	640 397 169 296 257	215 151	183 147 129 139 133	143 87 100 101 92	89 63 62 53	47 39 35 39 38	36 28 28 17 21	79 39 33 24 29	78 39 20
Total	1,760	1,067	731	523	320	198	130	195	158
Total for 1897	1,761	1,101	848	604	361	215	144	187	243

The percentage of police cases remanded six times and over to the total number of cases disposed of rose from 6.3 to 6.6. Taking district by district, the percentage comes to 7.3 in the 24-Parganas, 6.6 in Nadia, 8.7 in Murshidabad, 4.5 in Jessore, and 5.4 in Khulna. It is very unsatisfactory to observe that while the percentage at Jessore came to 4.5, it was nearly double at Murshidabad (8.7). I think it most probable that in many of these cases a good many of the remands might, with better management, have been avoided.

59. The table below shows the amount of criminal fines imposed and realized during the year as compared with 1897:—

Dystrator		Imp	osed.	Realized.				
District.	DISTRICT.		1897.		1898.	1897.	1898.	
1		2	3.	4				
	evi.	Rs.	· Rs.	Rs.	Rs.			
24-Parganas		74,148	61,952	63,654	56,808			
Nadia		16,858	21,488	14,913	20,193			
Murshidabad	***	8,960	16,128	7,815	13,579			
Jessore Khulna	•••	16,411 21,128	14,770 22,342	14,483	13,383 20,201			
Knubia	***	21,120	22,042	10,404	20,201			
Total		1,37,505	1,36,680	1,17,319	1,24,164			

Except in the districts of the 24-Parganas and Jessore, there was an increase in the amount of fines imposed and realized during the year. Taking the Division as a whole, it appears that of the fines imposed 90.8 per cent. were realized, against 85.3 per cent. in the previous year. The improvement has been shared by all the districts except Murshidabad, where the percentage decreased from 87.2 to 84.1, the largest share (93.9 per cent.) being contributed by the district of Nadia. The Magistrate of Nadia states that the fines were generally imposed with due regard to the circumstances of the accused persons.

60. The following statement shows the number of cases and the amount of compensation paid under section 250, Criminal Procedure Code, in the several districts of this Division during the year as compared with those of the year preceding:—

	Number	of cases.	Amount of	compensation.
DISTRICT.	1897.	1898.	1897.	1898.
24-Parganas Nadia Murshidabad Jessore	48 26 24 32	55 37 9 26	Rs. 687 463 412	Rs. 1,016 604 135
Khulna	12	17	2,102	1,614
•	142	144	3,844	2,454

The conclusion is forced on me that sufficient attention is not paid by the Magistrates to the provisions of this section of the Criminal Procedure Code.

61. The table below shows the number of cases in which whipping was awarded during the year as compared with the previous year:—

DISTRI	CT.			1897.	1898.
24-Parga	nas			136	105
Nadia		•••		127	72
Murshida	bad	Eliment gard marks		53	55
Jessore			***	44	36
Khulna				47	47
		Total		407	315
	and the same		Marie 2000		

There was a decrease in the number of cases in which whipping was awarded during the year, which is shared by all the districts except Jessore and

Khulna. The Magistrate of Nadia ascribes the decrease to the fact that owing to the famine there was an exceptionally large number of petty thefts in 1897, for which whipping was an appropriate punishment. The number of European British subjects brought to trial during the year was 13, against 16 in the previous year. Of these, 12 were in the 24-Parganas and 1 in Murshidabad. There was no case under the Age of Consent Act in any of the districts in this Division.

XVI.—REGISTRATION OF DEEDS.

62. The statement below shows the administration of the Registration Department in this Division during the years 1897-98 and 1898-99:—

		documents red in—	Receipt	Receipts in -		Expenditure in—			
	1897-98	1898-99.	1897-98.	1898-99.	1897-98.	1898-99.			
1	2	3	4	5	6	7			
24-Parganas Nadia Murshidabad Jessore Khulna	84,304 25,781 18,555 106,296 51,020	74,590 23,740 16,063 87,846 47,165	Rs. A. P. 84,532 9 0 27,549 0 0 22,501 0 0 72,077 2 0 42,831 0 0	76,973 2 0 26,663 0 0 19,345 6 0	13 069 0 0	42,730 9 2 18,311 0 0 12,209 15 6			
Total	283,956	249,404	2,49,400 11 0	2,30,885 13 .0	1,57,792 5 2	1,50,780 12 4			

The total number of documents registered in this Division during the year was 249,404, against 283,956 of the previous year, showing a decrease of 34,552 documents. The total receipts and expenditure fell off from Rs. 2,49,490-11 and Rs. 1,57,792-5-2 in 1897-98 to Rs. 2,30,885-13 and Rs. 1,50,780-12-4, respectively, in the year under report. This decrease in the number of documents registered, and consequently in receipts and expenditure, is shared by all the districts of this Division excepting Nadia, where there was a slight increase under head expenditure. In 1896-97 and 1897-98 scarcity prevailed more or less in all the districts of this Division, and the people mortgaged or sold their property for a living. The circumstances of those years were exceptional, and consequently the figures showing the particulars of registration for those years were abnormal, as will appear from the table given below:—

			Number of documents registered.	Receipts.	Expenditure		
	1	*	2	8	4		
				Rs. A. P.	Rs. A. P.		
1895-96		•••	223,819	2,08,886 0 0	1,36,695 0 0		
1896-97	•••		260,217	2,34,382 0 0	1,47,840 0 0		
1897-98	•••		283,956	2,49,490 11 0	1,57,792 5 2		
1898-99	•••		249,404	2,30,885 13 0	1,50,780 12 4		

The figures for the year under report when compared with those for 1895-96 show an improvement, both in the number of documents registered as well as in receipts and expenditure, but that appears to be due more to the general progress of the times than to any particular cause.

As remarked above, there was a decrease in the total number of documents registered and in receipts and expenditure. This decrease (excepting in Murshidabad, for which figures have not been furnished) occurred generally under all the heads of registration in all the districts, excepting a few noticed later on.

There was a noticeable increase in the number of perpetual leases in the 24-Parganas and Nadia; under head "Instruments of sale, etc., of moveable property of value less than Rs. 100" in Jessore and under head "Other leases" in Nadia. The increase in the number of perpetual leases in the 24-Parganas is reported to be due to settlements and resettlements in the Sundarbans; that in the number of perpetual and other leases in Nadia, to the extension of the system of subinfeudation, to settlements made by certain landlords, to renewal of several term leases, and to the better prospects of the crops which induced the peasantry to enter into new settlements. The increase of 1,342 instruments under head "Sale of immoveable property of value less than Rs. 100" in Jessore is explained by the Collector to be due to the good harvest of the year, which induced the raiyats to sell their holdings to get ready money for spending on marriage and other ceremonies.

XVII.—CONDITION OF THE DIVISION AS REGARDS LAND AND LAND REVENUE ADMINISTRATION.

63. The number of estates of each class borne on the revenue-roll of the several districts during the years 1897-98 and 1898-99 is shown below:—

YEAR.	Class I— Permanently- settled estates.	Class II— Temporarily- settled estates.	Class III— Estates held direct by Government.	Total.
1	2	3	4	5 .
1897-98 1898-99	9,394 9,398	731 726	252 255	10,377 10,379
Difference	+4	-5	+8	+2

64. There was no change in the total number of estates in any of the districts of this Division except the 24-Parganas, where two new estates were formed by partition. Transfers from one class to another took place in every district in consequence of the sale of permanently-settled estates for arrears of revenue and their purchase by Government for want of bidders, as also on account of settlement of khas mahals for definite periods and of sales of petty Government estates to private individuals with revenue fixed in perpetuity. The changes in Nadia were due also to the transfer of one estate to the district of Pabna and to the addition to the roll as a new estate, of one missing estate which had been removed from it.

65. The following table shows the demand, collections, remissions and balances of land revenue during the past two years, 1897-98 and 1898-99:—

YEAR.	Arrear demand.	Current demand.	Total demand.	Arrear collections.	Current collections.	Total collections.	Remissions.	Balance.	Percentage of collections on demand (col. 7 on col. 4.)
.1	2	3	4	5	6	7	8	9	10
1897-98 1898-99	Rs. 1,71,825 1,92,024	Rs. 51,29,779 51,49,209	Rs. 53,01,604 53,41,233	Rs. 1,42,203 1,65,558	Rs. 49,67,529 50,26,502	Rs. 51,09,732 51,93,060	Rs. 6,712 4,265	Rs. 1,85,160 1,43,908	96·3 97·2

Compared with the figures of the preceding year, the demands, collections and the percentage of collections on demand show an increase. The remissions and balances, however, fell from Rs. 6,712 and Rs. 1,85,160 to Rs. 4,265

and Rs. 1,43,908, respectively, the result as a whole testifying to the punctuality with which the land revenue is collected in the Division. The percentage of collections in each class is exhibited in the following statement:—

			18	197-98.			1898-99,					
CLASS OF ESTATES.	Arrear demand.		Percentage of collection (col. 3 on col. 2).	Current demand.	Current collection.	Percentage of collection (col. 6 on col. 5).	Arrear demand,	Arrear collection.	Percentage of collifection (col. 9 on col. 8).	Current demand.	Current collection.	Percentage of collection (col. 12 on col. 11).
1	2	3	4	5	6	7	8	9	10	11	19	13
1.—Perm a n e n t l y- settled estates. II. —Tem p o r a r i l y- settled estates. III. — Estates held direct by Government.	Rs. 38,098 48,551 85,176	Rs. 37,395 44,050 60,758	90.72	Rs. 44,42,414 3,31,430 3,55,935	Rs. 43,83,593 2,86,950 2,96,986	98·67 86·57 83·43	Rs. 59,641 49,624 82,759	Rs. 58,304 46,954 61,300	97·7 94·6 74·07	Rs. 44,42,643 3,36,918 3,69,648	Rs. 44,02,864 3,05,708 3,17,930	99°1 90°7 86°0
Total	1,71,825	1,42,203	82.76	51,29,779	49,67,529	96.90	1,92,024	1,66,558	86.7	51,49,209	50,26,502	97.6

Except in the case of class I estates, where there was a slight fall, the percentage of collections of arrear demands improved in the other two classes (II and III), though it was below the prescribed standard of cent per cent. The results in Nadia, Jessore and Khulna, where the percentage was above 95, may be accepted as fair. The collections were not satisfactory in the 24-Parganas or in Murshidabad. The current collections improved in all the three classes of estates. The percentage of total collections, *i.e.*, both arrear and current, is as follows:—

Calcutta		 		99.90
24-Parganas		 		95.40
Nadia	***	 		99.28
Murshidabad		 		98.59
Jessore		 •••		97:67
Khulna	•••	 	***	96.19
		Total		97.20

66. The statement below shows the collections in estates under direct management in each district of the Division:—

	8.		PERCENTAGE				4				GE OF-	
DISTRICT.	Number of estates.	Current demand.	Total demand.	Current collection	Arrear collection,	Total collection.	Current collec- tion on cur- rent demand.	Arrear collec- tion on arrear demand.	Total collections on total de-	Current collec- tions on cur- rent demand in 1897-98.		
1	2	3	4 ,	. 5	6	7	8	9	10	11	12	
Calcutta	34 34 74 82	Rs. 18,387 2,82,372 21,441 27,052 4,313 16,083	Rs. 21 47,939 4,295 24,046 1,821 4,637	Rs. 18,403 3,30,811 25,736 51,008 6,134 20,720	Rs. 18,375 2,40,694 20,377 19,200 4,071 15,213	Rs. 15 82,001 3,760 19,502 1,422 4,600	Rs 18,390 2,72,695 24,137 38,702 5,493 19,813	97°93 85°24 95°03 70°97 94°38 94°59	71.42 66.75 87.54 81.1 78.08 99.20	99*9 82:55 93:78 75:74 89:55 95:62	99*88 86*77 76*64 51*03 69*60 72*44	
Total	255	3,69,648	82,759	4,52,407	3,17,930	61,300	3,79,230	86.02	74'07	83.8		
Total for 1897-98 .	. 252	3,55,935	85,176	4,41,111	2,96,986	60,758	3,57,744	83'43	71.3	81.1	83'43	

The number of estates under direct management was 255, against 252 in the preceding year. There was no change in Calcutta, the 24-Parganas, or in Khulna. The number increased in Nadia from 32 to 34, and in Murshidabad, from 72 to 74, while in Jessore it decreased from 83 to 82. The increase in Nadia is due to the transfer of four temporarily-settled estates to this class on the expiry of their settlements and to the transfer of two estates to class II on resettlement. The increase in Murshidabad is due to the cancelment of leases of two resumed estates under class II for repeated default and their transfer to

The decrease in Jessore is ascribed to the fact that one estate, the property of Government, was under the orders of the Board of Revenue struck off the roll in consequence of its lands having merged into an estate lost by Government in a civil suit. The result of the year, so far as the divisional totals are concerned, was a decided improvement over that of the preceding year, there being an appreciable increase under all the heads. In the districts of the 24-Parganas, Nadia and Murshidabad, there was an increase in the current demand, while in the remaining districts there was a decrease increase is ascribed chiefly to resettlement of certain estates in the 24-Parganas, to utbandi settlements in Nadia, and to transfer of two estates to class III in Murshidabad. The decrease in Calcutta is as usual due to the redemption of land tax. In Jessore it was the result of transfer and retransfer of estates from one class to another. In Khulna the fluctuation is too insignificant to call for notice. Compared with the preceding year, the percentage of current collections on current demand improved in all the districts of this Division except Calcutta and the 24-Parganas. The increase was due chiefly to a better harvest. In Murshidabad, it was due partly to the entertainment of salaried tahsildars and halsannahs. The decrease in Calcutta was too slight to call for notice. In the 24-Parganas it was due to the partial failure of the crops in portions of the Diamond Harbour subdivision and Port Canning, and also to the bad system of collection of khas mahal rents by tahsildars paid by commission, which has since been replaced by salaried ones. Except in the 24-Parganas and Jessore, where there was a slight fall, the arrear collections improved decidedly in all the other districts, although the prescribed standard of cent per cent was nowhere attained, the bad state of collections being attributed chiefly to accumulation of heavy arrears in the beginning of the year due to successive failure of crops in preceding years.

67. The remissions granted during the year are classified below:-

			1897-98. Rs.	1898-99. Rs.
Nominal remissions			3,984	341
Remissions of grace	•••	•••	2,495	3,023
Ditto of right		•••	233	901
	Total		6,712	4,265
- 10 TO NOTE NOTE NOTE NOTE NOTE NOTE NOTE N			-	

Compared with the preceding year, there was a decrease in the remissions, due to decrease in the 24-Parganas, Nadia and Khulna, in spite of an increase of over Rs. 1,000 in Murshidabad. The nominal remissions represent fictitious demands of some estates bought in by Government for want of bidders, as also the arrear demand of a Government estate in the district of Khulna, sold to a private individual. The largest remissions of grace were granted to tenants of some of the Government estates, in the districts of the 24 Parganas and Murshidabad, owing to failure of crops and scantiness of water in a jhil, a small portion representing a remission of grace granted to the auction purchasers of thatching grass in the khas mahals of the Meherpore subdivision, in the district of Nadia, on account of loss by fire. The remissions of right were granted on account of acquisition of lands for public purposes, and irrecoverable rents of estates washed away by fluvial action. Except in the 24-Parganas and Murshidabad, there has been no material change during the year, either in the agency or in the mode of management of estates under direct management. In the 24-Parganas, a regular establishment of six tahsıldars and six peons was sanctioned by the Board to replace the collecting gumashtas on commission system employed in the Government estates in the Diamond Harbour subdivision. The Board's sanction having been received at the end of December 1898, when the collections had commenced, the old establishment was allowed to continue till the end of the collection season in March last, after which the new establishment was entertained. In Murshidabad the system of collection by tabsildars, paid by commission, having proved a failure, a salaried establishment of tabsildars and halsanuahs was entertained from the 1st August 1898. The paid system is reported to have proved a change for the better.

68. The statement below shows the allotment made and the expenditure incurred for the management of, and improvements in, khas mahals and those

	a fireering trace		AMOUNT ALI	LOTTED FROM	м		EXPENDI	TURE ON-		EDUC	ATION.
	Anna transport of the Anna transport	7½ pe	r cent.						13. 19	1	
DIVISION.	District.	Manage- ment pro- per, includ- ing contin- gencies,	Miscellan- eous and agricultur- al improve- ments, &c.	Two per cent. for sanitary improve- ments.	Total.	Management pro- per, includ- ing contin- gencies.	Miscellan- eous and agricultur- al improve- ments, &c.	Sanitary improve- ments.	Total.	Grant.	Expendi ture.
1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3	4	5	6	7	, 8	9	10	11	12
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
	24-Parganas— District Orphanganj market		4,859 29,963	11,019	30,458 46,905	14,416 16,412	4,632 28,833	11,019	30,067 45,245	3,535	3,535
ncy	Total	31,522	84,822	11,019	77,363	30,828	33,465	11/019	75,312	3,535	3,585
l	Nadia Murshidabad Jess-re Khulna	1,890	370 1,678 391 1,697	42 700	2,466 3,610 1,094 1,854	1,814 1,809 595	370 428 391 1,097	42 700	2,184 2,279 1,091 1,692	418 413 1,146	418 413
	GRAND TOTAL	36,268	38,358	11,761	86,387	35,046	35,751	11,761	82,558	5,512	5,512

A sum of Rs. 77,363 was allotted for the management of, and miscellaneous and sanitary improvements in, the Government estates, in the district of the 24-Parganas, of which the sum of Rs. 46,905 was sanctioned for the Orphanganj market. The allotment for miscellaneous and agricultural improvements amounted to Rs. 34,822, of which a sum of Rs. 29,963 was for the Orphanganj Market, and the remainder Rs. 4,859 was for the other Government estates in the district. The amount spent on miscellaneous and agricultural improvements was Rs. 33,465, of which Rs. 28,833 were spent in the Orphanganj market in the construction of new godowns, and in the repairs of existing buildings, sheds, &c., and the remainder (Rs. 4,632) was expended in repairing tahsil cutcherries, embankments and sluices, and constructing culverts in some Government estates. The unexpended balance was Rs. 1,357, which could not be utilised within the year, as the works for which the amount was sanctioned could not be completed within that period. The entire amount of Rs. 11,019, allotted for sanitary improvements, was utilized during the year and spent in filling up certain unhealthy tanks in the Government estate Panchannogram, and in raising the sites of certain other filled-up tanks and in constructing latrines.

In Nadia the whole of Rs. 370 allotted for miscellaneous improvements was spent in crecting sheds and repairing cutcherry houses in some Government estates. In Murshidabad a sum of Rs. 1,720 was allotted for miscellaneous and sanitary improvements, out of which Rs. 470 only were spent, and the balance (Rs. 1,250) lapsed to Government. This amount was sanctioned for the re-excavation of a tank and of a ditch in the Government estate, Gar Berhampore. The tank was rendered unnecessary by the placing of a hydrant of the Berhampore Water-Works near the tank. The early and excessive rains of the year under report, which kept the ditch almost full of water throughout the year stood in the way of re-excavation of the other. In Jessore the whole of the allotment of Rs. 1,091 made for miscellaneous and sanitary improvements was spent during the year in constructing and repairing certain cutcherry houses, raising the old Collectorate compound, re-excavating a tank at char Chatian, and in improving the drainage of the Narail subdivisional

cutcherry compound.

In Khulna the allotment sanctioned for works of miscellaneous and agricultural improvements was Rs. 1,097. In addition to this a sum of Rs. 1,300 was contributed by the khas mahal tenants of Chandkhali, Muhammadabad, etc., towards the construction of a substantial bridge over a khal in the estate. This amount, together with the whole of the Government grant, was spent during the year on miscellaneous and agricultural improvements. Besides the above a sum of Rs. 1,458 was spent on roads in Government estates by the District Boards of this Division, of which Rs. 1,200 were spent by the

District Board of the 24-Parganas, Rs. 117 by the District Board of Nadia, and Rs. 141 by the District Board of Murshidabad. No new staples were introduced, and no new agricultural implements were brought into use or improvements made in agricultural machinery during the year under report. In Jessore an experimental cultivation of sugarcane was tried in khas mahal char Barni in the Magura subdivision; but as the planting was done only a few days before the close of the year, the result is not known. In the 24-Parganas Rs. 3,535 were spent in the maintenance of 81 schools in Government estates. In Nadia 9 schools with 281 pupils were maintained by Government in khas mahals at a cost of Rs. 418. In Murshidabad 8 primary schools with 276 pupils were maintained in the Government estates at a cost of Rs. 413. In Jessore no grant towards education in khas mahals is given by Government, none being necessary, as the estates are generally scattered plots in villages where schools and pathsalas maintained by the District Board are in existence. In Khulna 23 schools with 820 pupils were maintained in the Government estates at a cost of Rs. 2,476, out of which Rs. 1,146 were contributed by Government. The condition of the raiyats of the Government estates in this Division was generally good during the year. The year's harvest was plentiful almost everywhere except in certain estates in Murshidabad, where the crops were partly damaged by floods. The registers and accounts of the several Government estates in this Division were duly examined by the inspecting officers. No material irregularities or discrepancies were brought to notice in any of the districts of this Division except in the 24-Parganas. The system of accounts of the Government estate Panchannogram in the 24-Parganas has been found to be defective. The raiyats' ledger is kept in an old and obsolete form. This was brought to the notice of the Board, who have directed the re-writing of the ledger in the Board's form No. II. It is now being re-written in this form. The improvement of the system of accounts is under consideration. In Murshidabad a tahsildar was dismissed during the year for misconduct, he being suspected of taking salami in making settlements with raiyats. No complaints were received against any other tahsildar or subordinate. Out of 1,216 estates or shares of estates with land revenue amounting to Rs. 2,54,052 which became liable to sale, only 86, or 7.14 per cent., were actually sold, against 7.5 per cent. of the preceding year and 8.2 per cent. of the year 1896-97. The sale law was worked with leniency in all the districts of this Division, and defaulting proprietors were allowed every facility for paying their dues and saving their estates or shares from sale. The law was, however, strictly followed in respect of habitual defaulters and their estates or shares were sold on the dates fixed for their sale.

71. In submitting the Report on the Administration of Land Revenue from the Commissioner in the Sundarbans for the year 1897-98, and subsequently in a separate letter, dated the 11th October 1898, I brought to the notice of the Board of Revenue that in the Khulna Sundarbans, the settlement-holders were in the habit of creating gantidari tenures with titles of Asat talukdars, that the latter in turn created Nimasat talukdars, and so forth, until there were four or five tenures between the settlement-holder and the cultivating raiyat, the result being that the last intermediate tenure-holder exacted as much as Rs. 4 to Rs. 8 for a bigha of land for which the settlement-holder paid four annas to Government. I further reported that there was no security of the tenants' rights, and that there was risk of extortion being practised upon the cultivating raiyats under the above system, and I gave it as my opinion that the evil would remain unchecked until all the Sundarbans mahals were surveyed and settled under the Bengal Tenancy Act. The Board of Revenue were at first under the impression that these middlemen exercised important functions towards the reclamation of the lands and contributed to the welfare of the cultivators, and therefore they did not find anything wrong or reprehensible in the system. They observed that the time for Government to reap the profits and to settle the estates would be when the present leases expired. however, pointed out that most of these middlemen were interlopers; that they had nothing to do with reclamation; that they came upon the scene when the

raiyats had cleared the land with great labour and trouble, and demanded any rate of rent they chose. It was further pointed out to the Board of Revenue that the oldest of the settlements under the Waste Lands Rules would not lapse earlier than the year 1919, and that the earliest date on which any of the leases other than those granted under the Waste Lands Rules would expire, was 1903-4. Considering the length of time that must elapse before the term of the current settlements would expire, I supported the suggestion made by Mr. Ross that survey and settlement operations under the Bengal Tenancy Act should be carried on in any case in which it was found that subinfeudation by the introduction of middlemen was giving rise to disputes, looting of crops, riots, etc. The Board of Revenue have now recognised that the system is bad, and have accepted the suggestion that the only remedy in specific cases is recourse to the provisions of Chapter X of the Bengal Tenancy Act. They have likewise agreed to consider any case that may be reported to them, in which action under Chapter X of the Tenancy Act is desirable.

74. Road and Public Works Cess.—The subjoined table shows the collections of road and Public Works cesses during the year:—

	1	DEMANI	DS.	1.90	COLLE	CTIONS.		1	BALANCES				de.
DISTRICT.	Current.,	Arrear.	Total,	Current, includ- ing previously paid in advance.	Arrear.	Advance for future years.	Total,	Current,	Arrear,	Total.	Deduct remissions.	Net arrear.	Percentage of balance on gross mand.
1	2	3	4	5	6	7	8	9	10	11	13	13	14
Parzanas— Road cess Public Works cess		Rs. 23,095 23,095	Rs. 1,41,963 1,41,963	Rs. 99,749 99,749	Rs. 20,389 20,388	Rs. 5,101 5,101	Rs. 1,25,239 1,25,238	Rs. 19,119 19,119	Rs. 2,706 2,707	Rs. 21,825 21,826	Rs.	Rs. 21,821	15'3
Total	2,37,736	46,190	2,83,926	1,99,498	40,777	10,202	2,50,477	35,238	5,413	43,651	8	43,643	15:3
Road cess Public Works cess	77,514 77,514	12,197 12,197	89,711 89,711	72,554 72,553	12,084 12,085	2,995 2,995	87.633 87.633	4,960 4,961	113 112	5,073 5,073	26	5,047	5'6
Total	1,55,028	24,394	1,79,422	1,45,107	24,169	5,990	1,75,266	9,921	225	10,146	52	10,094	5.6
rshidabad— Road cess Public Works cess	72,395 72,395	12,790 12,791	85,185 85,186	66,072 66,072	7,762 7,763	4,175 4,175	78,009 78,010	6,323 6,323	5,028 5,028	11,351 11,351	14 13	11,337	13:3
Total	1,44,790	25,581	1,70,371	1,32,144	15,525	8,350	1,56,019	12,646	10,056	22,702	27	11,338	13.3
Road cess Puolic Works cess	1,01,251 1,01,252	18,763 18,762	1,20,014 1,20,014	82,612 82,613	17,908 17,908	3,793 3,793	1,04,313 1,04,314	18,639 18,639	855 854	19,494 19,493		19,494	16.5
Total	2,02,503	37,525	2,40,028	1,65,225	35,816	7,586	2,08,627	37,278	1,709	38,987		19,493	16.2
Road cess Public Works cess	80,561 80,561	9,758 9,759	90,819 90,320	72,112 72,113	9,005 9,005	2,667 2,667	83,784 83,785	8,449 8,448	753 754	9,202 9,202	49	9,153	18-13
Total	1,61,122	19,517	1,80,639	1,44,225	18,010	5,334	1,67,569	16,897	1,507	18,404	98	9,153	18:13
Road cess Public Works cess	4,50,589 4,50,590	76,608 76,604	5,27,192 5,27,194	3,93,099 3,93,100	67,148 67,149	18,731 18,731	4,78,978 4,78,980	57,490 57,490	9,455	66,945 66,945	93	66,852	18:13
IND TOTAL FOR THE	9,01,179	1,53,207	10,54,386	7,86,199	1,34,297	37,462	9,57,958	1,14,980	18,910	1,33,890	185	1,33,705	12.6

75. There has been a decrease in the demand of cesses as compared with that of the preceding year. The decrease is shared by the districts of Jessore and Khulna, while the 24-Parganas, Nadia and Murshidabad show a slight increase. The decrease in Jessore is due to correction of certain mistakes made in the Revaluation Department. The decrease in Khulna is nominal, inasmuch as the demand due from estate No. 780, amounting to Rs. 1,490, of which abatement was afterwards sanctioned, was included in the current demand of the previous year. The collections, both arrear and current, improved in Nadia and Khulna, while in the 24-Parganas and Jessore the current collections fell off, but those of arrears improved, and in Murshidabad the current collections improved, but those of arrears fell off. The result is, on the whole, satisfactory, 90 6 per cent. of the total demand having been collected during the year, against 88.1 per cent. in the preceding year. General revaluation is in progress in the

24-Parganas. Partial revaluations took place in Nadia, Murshidabad and Khulna during the year. It has been proposed to make a general revaluation of the latter district. The proposal is now under the consideration of the Board of Revenue.

XVIII.—ATTACHED ESTATES, INCLUDING THOSE MANAGED BY THE COURT OF WARDS.

76. The number of estates under the management of the Court of Wards was four (as noted below), against five in the preceding year, the Kasimbazar estate in Murshidabad having been released in September 1897:—

 District.
 Ward's estate.
 Trust estate.

 24-Parganas ...
 ...
 Bhawanipur ...
 ...

 Jessore ...
 ...
 Sridharpur ...
 ...

 Khulna ...
 ...
 Satkhira ...
 Syudpur.

In addition to the above the Chanchra road estate in Jessore, referred to in paragraph 54 of the previous year's report, continued to be managed

during the year by the Collector of the district.

77. The Bhawanipur estate in the 24-Parganas, which was the most important estate in the Division, was released on the 16th February 1899. The ward attained his majority in August 1898; but, at his own request, the Government of Bengal was pleased to direct the Court of Wards to retain charge of his estate for a further period of two years. In November 1898, however, the ward applied for the release of his estate, and accordingly it was made over to him on the aforesaid date, after management by the Court for a period of twelve years and some months. The gross rental at the date of assumption of charge was Rs. 1,44,584, while at the date of release it was Rs. 1,57,110, showing an increase of Rs. 12,726, which was chiefly due to the reclamation of Sundarbans jungle lands and to settlement and re-settlement of raiyati holdings, etc. The total demand of the estate during the period under report was Rs. 2,66,328, inclusive of an arrear demand of Rs. 1,29,116, of which Rs. 1,11,741, or 81.4 per cent. of the current demand, and 41.9 per cent. of the total demand, were realised, against 111.2 per cent. and 56.9 per cent., respectively, in the previous year. The amount written off under proper sanction, as bad and irrecoverable, was Rs. 6,003, leaving a balance of Rs. 1,48,584, against Rs. 1,25,453 in the previous year. The decrease in the percentage of collections is due to the fact that the estate was released at the commencement of the best collection season. Rupees 2,147 were spent on the construction and repair of buildings and Rs. 10,049 on excavation and re-excavation of tanks, construction and repair of village roads, bridges and culverts, raising and repairing embankments, and damming and deepening khals. The total outlay (Rs. 12,196) on works of improvement was less than that in the previous year, because the estate passed out of the hands of the Court at a time when such works are carried out. The amount spent under this head during the entire period of management was Rs. 1,90,916, of which Rs. 47,529 represent the expenditure on construction and repairs of houses and the balance on the reclamation of about 15,000 bighas of jungle lands, maintenance of embankments, dams and hats, excavation and re-excavation of 22 tanks, construction and repairs of four bridges and a large number of village roads, deepening three khals, and introducing the cultivation of potato in the Sundarbans portion of the estate. The expenditure on schools and dispensaries during the period under report was Rs. 500 and Rs. 693, respectively, against Rs. 601 and Rs. 823 in the previous year. The total outlay under these heads during the whole period of management amounted to Rs. 2,905 and Rs. 5,069, respectively. The estate maintained 15 schools and pathsalas and five dispensaries, two of which were established during the period of the Court's management. The health and general condition of the raiyats were good during the year under report. The condition of the tenants of the Jamira circle, who suffered health from the secreity of 1896-97, is reported the Jamira circle, who suffered badly from the scarcity of 1896-97, is reported to be improving, and it is expected that another year's good crop will enable them to recover their former position. The financial results of the Courts' management appear, on the whole, to be satisfactory. After paying off liabilities to the extent of Rs. 46 151 due at the commencement of the Courts' ties to the extent of Rs. 46,151 due at the commencement of the Courts'

management and providing for the expenses of the marriage of the ward, the sradh of his grandmother, and of the annaprasun ceremonies of the son and daughter of the ward, amounting to Rs. 35,000 in all, Rs. 1,78,694 were invested in Government promissory notes and lands, Rs. 7,215 were paid to the ward on the release of the estate, and there was a cash balance of Rs. 4,121 to the credit of the estate in the Treasury on the 31st March 1899. The ward enjoyed good health during the year. He continued his studies with his tutor, and is said to have made fair progress in English. Also he received a course of training in zamindari management. At first the management of the estate was not very successful, but since the appointment of the present manager, Babu Durga Das Bose, it has gradually improved. He is an experienced and careful officer, and managed the estate with great energy and efficiency.

78. The total demand of the Sridharpur estate in Jessore was Rs. 8,69,769, of which Rs. 7,57,827 represent the arrear balances due at the commencement of the year. The increase in the arrear demand is due to the fact that a large amount of arrears was first ascertained during the year from papers obtained from certain dismissed and absconding naibs, after taking legal steps against them. Rupees 86,956, or 77.6 per cent. of the current demand, were realised during the year, against 82.8 per cent. in the previous year, and Rs. 2,56,304 were remitted, under proper sanction, leaving a balance of Rs. 5,32,626 out-

standing at its close.

XIX.-EXCISE.

80. The following statement shows the excise revenue realized in the Division during the years 1897-98 and 1898-99:—

DISTRICT.	Number o	f Licenses.	Increase,	Decrease.	Rev	enue.		Decrease.
DISTRICT.	1897-98.	1898-99.		- variable.	1897-98.	1898-99.	Increase.	
v godina prakkalaj okraja di oreni.	2	3	4	5	. 6	7	8	9
24-Parganas Calcutta	1,000 792 239 304 251 185	1,262 823 248 370 226	202 31 9 66 	 25	Rs. 5,04,478 28,49,521 1,24,448 1,40,997 84,636 73,027	Rs. 5,32,941 29,15,550 1,28,247 1,50,425 92,341 83,041	Rs. 28,863 66,029 3,799 9,428 7,705 10,014	Rs
Total	2,771	3,113	368	26	37,76,707	39,02,545	1,25,838	
The state of the latter of	Net i	ncrease	3	42	Net	increase	1	25,838

There was a net increase of 342 licenses, with a corresponding increase in the revenue, amounting to Rs. 1,25,838, due to increased consumption of exciseable articles and favourable settlement of shops, indicating that the country has recovered from the effects of the famine of the preceding year, in which the revenue declined to the extent of Rs. 1,01,668.

81. The table below shows the revenue derived from each exciseable article during the past two years:—

	Number of Licenses.				Rev	enue.	790	. *
EXCISABLE ARTICLES.	1897-98.	1898-99.	Increase.	Decrease.	1897-98.	1898-99,	Increase.	Decrease.
	2	8	- 4	5	G	7	8	9
Country spirits Rum, imported spirits, &c. Tari Pachwai Chanas, majum and	371 323 620 383 19	369 319 883 386 19	263 3	9 4 	Rs. 16,83,641 5,67,106 1,72,648 23,258 17,489	Rs. 19,02,935 4,75,413 1,65,130 26,579 18,894	Rs. 2,19,294 3,321 1,405	Rs. 91,693 7,518
Ganja and siddhi Opium Suirits used for arts Miscellaneous	464 591 	463 625 49	34 49	1 	5,49,073 7,60,396 126 2,970	5,48,204 7,63,237 320 1,833	2,841 194	869 1,137
Total	2,771	3,173	349	7	87,76,707	39,02,545	2,27,055	1,01,217

There was an improvement in the revenue from country spirits in every district of the Division, owing to increased consumption. The better condition of the people on account of good harvest and better supervision against illicit production brought about this result.

83. Salt.—There was no change in the protected area in the two saliferous districts in the Division, viz., the 24-Parganas and Khulna, nor was their any incident requiring special notice.

The table below compares the consumption of salt in the two districts

during the past two years:-

District.		1897-98.	1898-99.	Increase.	Decrease.	REMARKS.	
1		2	3	4	- 5	tricker of	
		Mds.	Mds.	Mds.	rea dicini della Centra dicini dicini	em. Ergoes	
24-Parganas Khulna	:::	1,51,468 1,12,908	1,78,092 1,24,807	26,624 11,899	posporabile Walter	ere remitteed.	
Total		2,64,376	3,02,899	38,523	10.0		

There was an increase in the quantity of salt sold in both the districts. The Collector of the 24-Parganas reports that the increase was mostly contributed by certain thanas of the Sadar and Diamond Harbour subdivisions, where the salt preventive staff did good work by keeping an efficient check upon illicit manufacture, and that it was also partly due to the successful vigilance kept over the local illicit manufacture of salt, and partly to the improved condition of the people owing to a good harvest. The increase in Khulna is reported to be due to good harvests, and to careful vigilance on the part of the police.

84. The table below shows the quantity of salt confiscated and the fines and forfeitures realized, and the rewards granted in each of the two districts:—

DISTRICT	11.5		of salt con- ited—		nd forfei- alized—	Reward	s paid—	KS.
		1897-98.	1898-99.	1897-98.	1898-99.	1897-98.	1898-99.	REMARKS
1	igg in	2	3	4	5	6	7	8
		Mds. s. c.	Mds. s. c.	Rs.	Rs.	Rs.	Rs.	1 1
24-Parganas Khulna	:::	31 32 13 5 20 1	167 0 8½ 5 32 10	888 133	3,949 82	464 101	750 25	our:
Total	•••	87 12 14	172 33 21	1,021	4,031	565	775	

There was a large increase in the quantity of salt confiscated in the 24-Parganas, attributable to the detection of a large number of cases by the salt revenue officers. The variation in the quantity of salt confiscated in Khulna is slight. It is reported that the rewards in the cases brought up by the salt revenue officers will be adjusted by the Assistant Commissioner of Salt Revenue, and have not been paid from the district of the 24-Parganas. In Khulna Rs. 25 were disbursed to informers, &c., as rewards, against Rs. 101 paid in the preceding year. The falling off is explained by the fact that no reward was granted for detection of cases of illicit manufacture of salt, as no such case occurred during the year.

85. The number of cases instituted for offences against the salt laws is shown below:—

		1897-98.	1898-99.
24-Parganas Khulna	 	178 15	329 20
		193	349

The institutions increased in both the districts. The salt revenue officers were given powers to arrest offenders in the year under report, hence the increase in the 24-Parganas. The increase in Khulna is the result of careful vigilance of the police. The rowana system is reported to work satisfactorily in both the districts.

XX.-STAMPS.

86. The following table shows the statistics of the stamp revenue in this Division during the year under report, as compared with those of the preceding year:—

	Action (Control	RECEIPT	8.	Commission of the State of the				
YEAK.	Sale of Court- fee stamps, stamps, for copies &c.	Sale of non- judicial stamps.	Miscella- neous receipts.	Total.	Refunds.	Other charges.	Total,	Remarks
1 0	2 .	3	4	8 8	6	7	8	9
	Rs.	Rs.	Rs.	Rs.	Rs.	Ra,	Rs.	
1897-98 1898-99	30,45,345 30,49,169	18,56,147 15,94,253	59,771 30,681	49,61,263 46,73,103	83,415 81,558	72,431 49,629	1,55,846 1,31,187	
Increase Decrease	2,824	2,61,894	29,090	2,88,160	1,857	22,802	24,659	

The sales of stamps in each district are shown below :-

the marks on		1897-98. Rs.	1898-99. Rs.
Calcutta		27,16,726	
	eroll the while		24,32,010
24-Parganas	•••	7,53,123	7,61,577
Nadia		3,46,887	3,64,925
Murshidabad	•••	3,04,844	2,77,256
Jessore		4,35,754	4,50,358
Khulna	•••	3,44,158	3,56,301
Total		49,01,492	46,42,422

There was an increase in the revenue from Court-fee stamps in every district except Calcutta and Murshidabad. The increase is due to the institution of a larger number of civil suits of high value, owing to the good harvests of the year. Also, in the period following the famine, people had recourse to Civil Courts for the realization of their money: hence the increase in civil litigation. The decrease in Calcutta is due to a falling off in the amount of Probate and Administration duty, also to the fact that the sales were affected by the exodus in 1898-99 in consequence of the plague scare. The decline in Murshidabad may be attributed to the fact that in the preceding year some stamps of high value were sold for the institution of civil suits for large sums. The sale of non-judicial stamps decreased in all districts. In consequence of the good harvests of the year under report the people had less necessity to borrow money on deeds, mortgages, etc. The Collector of Calcutta reports that owing to the famine and plague scare, the business in Calcutta in all its branches suffered considerably with the result that the sales of these stamps were affected.

XXI.-INCOME-TAX.

88. The following table shows the demand, collection and balance of income-tax in the several districts of this Division, including Calcutta, during the year 1898-99:—

r serelainer	Winderson (1994) Winderson (1994)	2 iko E.	r sag. Stille di		Arresta		DIFFERENCE BETWEEN COLUMNS 5 AND 7.				Miga <u>s</u>
DISTRICT.	Gross demand.	Remission.	Net demand.	Collection.	Balance.	Collection in the year 1897-98.	ġ	.98	Percentage of increase.	tage of	REMARKS
04-302 mm	01-10-1805 1-17-1805	William of	CTROME STATE	angar ing	n Nigeri	e vaiduj.	Incresse	Decrease	Percen	Percentage of decrease.	**************************************
1	3	. 3	il Ann		6.	7	. 8	9	10	11	19
	Rg.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.			(O)(B)
4-Parganas	78,952 23,53,990	1,964 65,805	76,988 22,88,185	74,696 21,91,949	2,292 96,236	74,442 21,22,938	254 69,011		3·3 5·5		13364
ladia furshidabad	61,830 68,858	1,070 2,748	60,760 66,110	60,469 66,110	291	57,304 63,017	3,165 8,093		5.5		SMO
essore hulna	46,919 38,189	1,670	45,249 37,340	44,396 86,140	853 1,200	44,959 33,485	2,655	563	7.9	1.3	2 - COLUMN 1
Total	26,48,738	74,106	1 25,74,632	24,73,760	1,00,872	23,96,145	77,615	14 \$	2.4		Taraba a

93. The average incidence of the tax, excluding Calcutta, was one rupee to 27 persons as compared with 28 persons in the preceding year. In Calcutta the incidence was one rupee to every 4 persons or the same as in the previous year. The tax continues to be as unpopular as ever. But the people, aware of the impossibility of getting any relief, are becoming more and more accustomed to it, and there was no open indication of discontent.

XXIII.-RAILWAYS AND OTHER PUBLIC WORKS.

98. Railways.—In the 24-Parganas, 109.6 miles of the Eastern Bengal State Railway and 32 miles of the Bengal Central Railway were open for traffic during the year. The proposal to construct a light feeder railway from Chandipur to Taki viā Basirhat was considered by Messrs. Barry and Company, and they now contemplate the construction of a broad gauge line. The alignment is to pass from Chandipur viā Daskhinhat, Changdana, Itadipur, Joypur, Soladanga and other villages to Taki. The Ranaghat Krishnagar light railway in Nadia was opened on the 4th April 1899. The Azimganj-Nalhati branch of the East Indian Railway is the only line open in the district of Murshidabad. The extension of the riverside sidings of this line has been completed. Survey is now being made for the construction of a new line named the Ranaghat-Ganges-Katihar Railway, which is to pass through Nadia and Murshidabad. No new railways were constructed in Jessore or Khulna. As reported last year, a survey for a line from Kishanganj to Magura viâ Kotchandpur was made, and another survey was completed during the year from Bongaon to Chandpur, but nothing (apart from correspondence) has since been done to carry out either project.

99. Embankments, drainages, sluices, &c.—In the 24-Parganas, a sum of Rs. 26,430 was spent in maintaining 216\frac{3}{4}\$ miles of schedule D embankments against Rs. 18,914 in the previous year. There are 71 drainage and irrigation sluices, of which 48 are maintained by Government, 4 by the Calcutta Corporation, and 19 by the zamindars. Two retired lines of embankment have been sanctioned during the year under report, viz., one at Jahanabad and the other at Doorbaberia. Two single vented irrigation sluices, one at Ahmedpur and the other on the Kawratolla khal were taken in hand during the year. Nine cuts were allowed in embankments for drainage and eight for irrigation. Besides these, three cuts were made surreptitiously. In Murshidabad the Bhagirathi embankment was maintained in proper order. A sum of Rs 62,883 was expended towards the construction of a retired line of embankment at Bhagwangola. The work was commenced in 1897-98, and is expected to be completed during the current year. In Jessore some petty repairs were made by the Local Board of Magura to the embankment which exists along the bank

of the Navaganga to protect the town from flood. A small embankment was constructed by Government in khas mahal Protapkati, in the district of Khulna, for the protection of paddy from the encroachment of salt-water.

100. Buildings.—No buildings of any importance were constructed during the year in the 24-Parganas, Nadia, or Murshidabad. In Jessore a pucka building was constructed by Government for the subdivisional office and Court at Narail at a cost of about Rs. 14,000. A dispensary building was constructed at Mollahat in Khulna at a cost of Rs. 638. The Government

buildings at Berhampore and Jessore were repaired during the year.

District Board of the 24-Parganas expended Rs. 2,784, against Rs. 6,693 in the previous year, on water-supply. Of this sum, Rs. 2,356 were spent in the excavation or re-excavation of tanks at Rahuta, Dattapukur, Srikrishnapur and Bankipur, and Rs. 116 in sinking wells at Gauripur and Deyganga. A sum of Rs. 2,779 was spent in making sanitary arrangements for the Saugore and Harwa melas. The District Board of Nadia expended Rs. 1,728 in the construction and repair of wells. An expenditure of Rs. 1,613 was incurred in Murshidabad in re-excavating three tanks and sinking nine wells. In Jessore Rs. 719 were spent in sinking or repairing wells and making other sanitary improvements. The District Board of Khulna spent Rs. 1,699 for the excavation of three tanks and undertook the completion and fencing of a number of tanks excavated at the time of the scarcity in the Satkhira subdivision at a cost of Rs. 4,099, but the whole work was not completed within the year. A further sum of Rs. 282 was spent by that body for the maintenance of the existing tanks.

XXIV.-COMMUNICATIONS.

by the District Board of the 24-Parganas at a cost of Rs. 72,398, the average expenditure per mile being Rs. 848, against Rs. 751 of the preceding year. The condition of these roads is satisfactory. The maintenance of 150 miles of district roads, metalled and bridged, cost the Board Rs. 59,393, or Rs. 395 per mile, against Rs. 354 in the previous year. These roads are generally in fair order. A sum of Rs. 13,872 was spent in maintaining 307½ miles of unmetalled roads, wholly or partially bridged, the average rate being Rs. 53 per mile against Rs. 37 in the previous year. There were also 992½ miles of village roads maintained at a cost of Rs. 13,321. The unmetalled and village roads are generally in passable order. A sum of Rs. 13,481 was spent by the District Board on original works against Rs. 5,267 in 1897-98, and Rs. 1,187 in repairing platforms of some ferry ghats. In Nadia the Board's expenditure on original works was Rs. 3,481, or Rs. 7,608 less than in the preceding year. The expenditure incurred in maintaining the different classes of district roads was Rs. 39,962, against Rs. 43,752, and of village roads Rs. 3,816, against Rs. 4,695 in 1897-98. The flood, which occurred during the year, did great damage to some of the metalled roads and to all unmetalled roads. A sum of Rs. 3,755 was spent by the District Board of Murshidabad on original works against Rs. 2,605 in 1897-98. Of the 1,695½ miles of roads in the district, the maintenance of 24 miles of numetalled but bridged roads, Rs. 10,411; 350 miles of village roads, Rs. 6,259. In Jessore a sum of Rs. 9,434 was spent in repairing 42 miles of Provincial roads, including inspection and dák bungalows, bridges, &e., with their establishment; Rs. 34,576 on 110 miles of metalled district roads; Rs. 14,277 on 366½ miles of unmetalled district roads and 562 miles of village roads. The district roads were repaired at a cost of Rs. 17,418, and the village roads, of Rs. 12,539. A sum of Rs. 15,140 was spent in bridging and Rs. 2,755, in constructing roads. The Di

Rs. 3,575 in providing landing stages to ferry ghats.

103. Arboriculture.—In the 24-Parganas 100 new trees were planted along the different roads during the year and the existing trees were maintained at a

total cost of Rs. 1,447, against Rs. 838 in the previous year. There were about 16,100 trees along Provincial and district roads. A sum of Rs. 764 was spent in Nadia on roadside trees, against Rs. 501 in 1897-98. Among the trees planted, 1,000 were mahogany brought from the Botanical Gardens at Sibpur. In Murshidabad Rs. 522, and in Khulna Rs. 221, were spent in planting and rearing trees on roadsides, against Rs. 145 and Rs. 275, respectively, in the previous year. A sum of Rs. 1,238 was spent in Jessore in planting 1,200 trees on roadsides and maintaining the existing trees, against Rs. 639 in the previous year.

104. Communication by water.—In the 24 Parganas the Circular Canals (10 miles in length) and Tolly's Nala, including Kawrapukur khal (37 miles) were maintained at a cost of Rs. 45,611, against Rs. 39,748 in 1897-98, while the gross revenue from tolls on these two canals was Rs. 3,68,354, against Rs. 4,08,017 in the previous year. Two thousand six-hundred and seventy-two steamers passed through the Sundarbans channel, against 2,497 in 1897-98, yielding a gross revenue of Rs. 13,360 in tolls, against Rs. 12,485 in the previous year. The Bhangore khal, which was completed last year, is now in working order. For a few months during the year a ferry steamer of Messrs. Hoare, Miller and Company plied regularly twice daily between Azimganj and Berhampore in Murshidabad, but owing to the want of sufficient water in the river, the service had to be stopped, as in the previous year, in October; and the steamer now runs between Lalbagh and Azimganj. Another steamer of Messrs. Hoare, Miller and Company plied twice a week for some months between Azimganj and Dhuliyan. A third steamer belonging to the same Company carried passengers and goods between Calcutta and Jangipur during a part of the year. In Jessore and Khulna a steamer used to ply between Jhinkargatcha and Kapilmani. A launch service was started by Babu Satindra Nath Rai Chowdry, Zamindar of Satkhira, between Jadubpur and Satkhira, but the project fell through, as the river Betna, by which the route lay, was not passable at places. There were two daily steamer services, one between Khulna and Barisal, and another between Calcutta and Morrellganj. Another steamer service runs between Khulna and Narail. Since the close of the year a new steamer service has been started between Khulna and Barisal by the Atharabanki river, the route by the Alaipur khal, Bagerhat and Pirojpur being given up.

XXVI.-EDUCATION.

106. General.—The following table compares the statistics of educational institutions of all classes for the past two years:—

CLASS OF INSTITUTIONS.							
Public Institutions—		Schools.	Pupils.	Schools.	Punila		
Secondary High English Middle ,, Vernacula Upper		81 172 220 509	13,984 13,452 13,678 22,552	86 168 214	Pupils. 15,446 12,809 12,723		
Primary { Lower Female	::	3,972 9 403	126,438 275 9,711	519 3,851 62 410	23,737 125,755 856 9,883		
Total of Public Institutions	•••	5,366	199,990	5,310	201,209		
Private Institutions— Advanced, teaching { Arabic Sanskrit Elementary, teaching vernacular only	 or	3 90	83 816	3 39	88 286		
Teaching the Koran only		12	39 240	13 6	127 118		
Total Private Institutions		110	1,187	61	619		
GRAND TOTAL	•••	5,476	201,177	5,371	201,828		

The total number of institutions, public and private, decreased by 105, but the pupils attending them increased by 651. The public institutions fell off from 5,366 to 5,310, though the pupils attending them rose from 199,990 to 201,209. The schools which gained both in number and pupils were the

high English, upper primary, special and female, while both the classes of middle schools as well as the lower primary schools slightly decreased. The private institutions decreased from 110 with 1,187 pupils to 61 with 619 pupils. The decrease is mainly noticeable in advanced Sanskrit teaching.

107. The statement below compares the expenditure on education during

the past two years :-

eranes and erana per a company of the control of th	RIMTON V	P0F25-1124	1897-98.			1898-99.					
HEADS OF CHARGES.	Govern- ment.	District funds.	Municipal funds.	Private sources.	Total.	Govern- ment.	District funds.	Munici- pal funds.	Private sources.		
1	2	3	4	5	6 ×	7	. 8	9	10	11	
Secondary education Primary ditto Female ditto Special ditto Scholarships	Rs. 81,310 9,511 12,861 23,646 8,634 5,934 15,458 42,051	Rs. 38,867 62,104 4,569	Rs. 2,635 12,050 2,270 132 1,383 1,318	Rs. 3,73,850 2,25,107 42,413 13,892 42 22,832 35,983	Rs. 4,96,662 3,08,772 62,213 37,670 11,074 30,680 57,708 79,924	Rs. 76,839 9,770 12,624 27,546 8,211 12,912 6,109 43,936	Rs. 39,706 64,475 5,159 2,569 480 3,911 32,001	Rs. 1,322 11,264 1,775 342 310 615	Rs. 3,87,578 2,39,247 42,481 27,914 73 21,143 35,429	Rs. 5,05,445 3,24,756 62,039 55,802 10,858 34,845 46,064 75,937	
Total	1,99,405	1,51,431	19,788	7,14,079	10,84,703	1,97,947	1,48,301	15,628	7,53,870	11,15,746	

The total expenditure shows an increase by Rs. 31,043, owing solely to increased contributions from private sources. The expenditure from Provincial revenues decreased by Rs. 1,458, that from district funds by Rs. 3,130, and that from municipal funds by Rs. 4,160. The expenditure increased under the heads of Secondary, Primary and Special Education and Buildings and Furniture, while it decreased under the heads of Female Education, Scholarships, Miscellaneous and Inspection. The increase of Rs. 18,132 under the head of Special Instruction is said to be due to the inclusion under this head of such Sanskrit tols as have adopted the Government standard, the expenditure on them having in previous years been shown as a part of miscellaneous charges. This also accounts for the falling off in miscellaneous expenditure.

108. The following statement compares the different classes of schools under the control of District Boards :-

	1	1897-98.							1898-99.								
*		Aide		Middle vernacular.		Aided primary.		Ai	ded.	Middle vernacular.			Aided primary.		T		
DISTRICT.		Bigh English.	Middle English.	Managed by Dis- trict Boards.	Aided by District Boards.	Upper.	Lower.	Aided girls'.	Total.	High English.	Middle English.	Managed by Dis- trict Boards.	Aided by District Boards.	Upper.	Lower,	Aided girls'.	Totel.
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
A-Parganas Nadia Murshidabad essore Khulna		:: :: 1	17 30 12 12 23	3 3 2	30 14 12 24 27	54 72 60 131 75	985 480 459 669 585	15 54 19 87 30	1,104 653 562 923 743	₁	18 29 12 23 23	3 3 	29 -14 -12 -38 -27	60 80 58 142 74	979 468 446 606 634	19 65 15 92 36	1,108 666 54: 901 796
Total	1	1	94	8	107	392	3,178	205	3,985	1	105	8	120	414	3,133	227	4,00

The number of schools under the control of District Boards increased by 23. The increase is shared by the 24-Parganas, Nadia and Khulna, while Murshidabad and Jessore show a falling off, chiefly in the number of lower primary schools.

109. There are three colleges in this Division sending up pupils for examination in Arts—the Krishnagar College in University education. Nadia, the Berhampore College in Murshidabad, and the Narail Victoria College in Jessore. The first two teach up to the B.A. standard, and the last, F.A. standard. A sum of Rs. 21,781 was spent in maintaining the Krishnagar and Rs. 3,879 the Narail Victoria College during the year, of which Rs. 14,604 and Rs. 1,200 were paid by Government. The cost of maintenance of the Berhampore College amounted to Rs. 26,446, of which Rs. 5,638 were met from fees, and the rest from the estate of Maharaja Manindra Chandra Nandi. The scheme for the management of the institution permanently by the Maharaja, as referred to in my last report, has been generally settled and a draft deed is now under preparation.

110. The subjoined table compares the statistics of high English, middle English and middle vernacular schools for

Secondary education. the past two years:—

				1897-	.98.	1898	-99.
High English—		•		Schools.	Pupils.	Schools.	Pupils
Managed by Go	overnme	nt		7	1,651	7	1,874
Do. by Di Aided by Gove	strict or	Municipal	Boards Muni-	1	338	1	362
cipal Boards				56	8,940	56	9,349
Unaided		•••		17	3,055	22	3,861
		Total		81	13,984	86	15,446
Middle English -					-		-
Managed by Go		nt					
Do. by Di Aided by Gover	istrict or	Municipal	Boards				
cipal Boards	rument,	District Of	. mum-	110	0.000	107	
	ALC: THE STATE OF			117	9.383	127	9.847
Unaided	:::	*		117 55	9,383 4,069	127 41	9,847 2,962
Unaided		Total		THE RESERVE AND ADDRESS.			2,962
Unaided	•••	Total		55	4,069	41	2,962
Unaided Aiddle Vernacula	 ar—			55	4,069	41	2,962
Unaided Aiddle Vernacult Managed by Gr Do. by Di	ar — overnme	ent Municipal	 I Boards	172	13,452	168	2,962 12,809 97
Unaided Aiddle Vernacula Managed by Gr Do. by Di Aided by Gove	ar — overnment,	ent Municipal	 I Boards	172 1 8	4,069 13,452 85 587	1 8	2,962 12,809 97 644
Unaided Inddle Vernacula Managed by Go Do. by Di Aided by Gove cipal Boards	ar — overnment,	ent Municipal	 I Boards	1 8 184	4,069 13,452 85 587 11,258	1 8 187	2,962 12,809 97 544 10,850
Unaided Middle Vernacula Managed by G- Do. by Di Aided by Gove	ar — overnment,	ont Municipal District, o	l Boards	172 1 8	4,069 13,452 85 587	1 8	2,962 12,809
Unaided Middle Vernacult Managed by Go Do. by Di Aided by Gove cipal Boards	ar — overnme istrict or	Municipal District, o	Boards	1 8 184	4,069 13,452 85 587 11,258	1 8 187	2,962 12,809 97 544 10,850

The number of secondary schools and of the pupils attending them decreased by 5 and 36 respectively, that of the high English schools increased by 5, and the pupils attending them by 1,462. Middle vernacular schools decreased by 6 and their pupils by 855, and middle English schools by 4 and their pupils by 643.

111. The statement below shows the statistics of primary schools for Primary education. native boys for the past two years:—

	1897	-98.	1898	-99.
Upper Primary— Managed by Government, District or	Schools.	Pupils.	Schools.	Pupils.
Municipal Boards Aided by Government, District or Muni-				
cipal Boards	500	22,218	509	23,200
Unaided	9	334	10	537
Total	509	22,552	519	23,737
Lower Primary—				and order or for
Managed by Government, District or Municipal Boards				
Aided by Government, District or Muni-				
cipal Boards	3,541	1,16,165	3,480	1,15,798
Unaided	431	10,273	371	9,957
Total	3,972	1,26,438	3,851	1,25,755
GRAND TOTAL	4,481	1,48,990	4,370	1,49,492

The number of upper primary schools increased by 10 and their pupils by 1,185, but that of the lower primary schools diminished by 121 and the pupils attending them by 683. Thus there was a net decrease of 111 in the number of primary schools but a net increase of 502 in that of pupils attending them.

112. The following table shows the different classes of special schools for Special instruction. the past two years:—

	Innila
Schools. Pupils. Schools. J Training schools for masters 2 54 2 Ditto for mistresses 4 145 4 Industrial schools 2 25 2	upils. 44 143 29
Other schools 53	584
Total 8 224 61	800

The year under report shows a large increase both in the number and attendance of special schools, owing, as already reported, to the classification of a number of Sanskrit tols, which have adopted the Government standard, under this head.

113. The table below compares the number of girls' schools and pupils as well as the expenditure incurred during the past

	UV	vo years	1897-	98.		1898-	99.
Mary Control of the C		Schools.	Pupils.	Expenditure.	Schools.	Pupils.	Expenditure.
Managed by Government Do. by District or Munic	ipal						
Boards Aided by Government, Dist	rict	1	48	224	1	45	227
or Municipal Boards Unaided		366 36	9,026	60,878 1,111	369 40	9,153	60,682
		-					1,130
Total Girls in boys' schools		403	9,711* 4,076	62,213	410	9,883† 3,823	62,039
Citis in boys solicors		-				3,023	
GRAND TOTAL		403	13,787	62,213	[410 1	3,706	62,039
		* Include		in girls' schools.			

The number of girls' schools and that of the pupils attending them show some increase, the former by 7 and the latter by 172. Owing to a falling off in the number of girls attending boys' schools and to an increase in that of boys reading in girls' schools, the total number of female scholars in schools for general education diminished, being 13,424 during the year under report, against 13,634 in the preceding year. The total expenditure incurred in female education decreased by Rs. 174.

114. The following table exhibits the number of Muhammadan pupils and

114. The following table exhibits the number of Muhammadan pupils and their proportion to the total number of pupils in the different classes of schools for the past two years, district by district:—

2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		1897-98.			1898-99.	
District.	Total number of pupils.	Number of Muham- madan pupils.	Percentage of Muham- madan pupils to total number of pupils.	Total number of pupils.	Number of Muham- madan pupils.	Percentage of Muham- madan pupils to total number of pupils.
1	2	3	4	5	6	7
24-Parganas Nadia Murshidabad Jessore Khulna	72,571 32,752 27,026 38,677 30,151	16,044 8,811 8,756 12,998 8,799	22·1 26·9 32·4 33·6 29·1	73,267 33,351 26,450 36,407 32,353	15,630 9,015 8,310 13,034 9,543	21·4 27·03 31·4 35·8 29·4
Total	201,177	55,408	27.5	201,828	55,532	27.51

The total number of Muhammadan pupils at school and their percentage show but very slight increase. The number of Muhammadan pupils in the 24-Parganas and Murshidabad has decreased, while it increased in the other districts. The result is on the whole satisfactory as showing that the Muhammadan community is gradually realizing the gravity of their situation as a backward people in comparison with their Hindu brethren.

The following statement shows the results attained by Muhammadan

candidates at different departmental examinations:-

	414.3		1897-98.			1898-99).
	District.	Middle scholarship examination.	Upper primary scholarship examination.	Lower primary scholar- ship examination.	Middle scholarship examination.	Upper primary scholar- ship examination	Lower primary scholar- ship examination.
	1	2	3	4	5	6	7
24-Parganas Nadia Murshidabad Jessore Khulna	 Total	 6 12 9 8 8 8	4 11 15 14 19	211 123 216 173 108	9 15 15 20 11	15 13 38 35 31	353 242 397 304 131

The result is very satisfactory as compared with that of the preceding year. 115. The following table shows the distribution of pupils of aboriginal Education of aboriginal and and other backward races at school for the last two years:-

YEAR.	High schools.	Middle schools.	Primary schools.	Girls' schools.	Special schools.	Total.
. v. 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	3	4	5	6	7
1897-98 1898 - 99		4 3	72 183		1 5	77 201

It is satisfactory to note that the number of aboriginal pupils has risen by 124.

116. The statistics of indigenous scholos of all classes are compared in the Indigenous education. following table, district by district:-

Distri	CT.			Year. ARABIC OF PERSIAN		IC OR SIAN.	SANSKRIT.		ELEMEN	NTARY.	Koran.		
		auri i				Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils.	Schools.	Pupils
1				2		3	4	.5	6	7	. 8	9	10
24-Parganas		{	1897-98 1898-99	=		ï	32	22 11	230 73	3	23	11 5	232 102
Nadia		{	1897-98 1898-99	::	::	= 1		40 16	330 118			Corner Corner	
Murshidabad		{	1897-98 1898-99	::		1	41 24	10	82 26	ï			
Jessore		- {	1897-98 1898-99	=	-	1	10	11.7	136 63	2 5	16 67	1	17
Khulna		{	1897-98 1898-99	:::	:::	1	32 32	4	38	";	52	ï	16
Total	••	{	1897-98 1898-99		:	8 8	83 88	90	816 286	5	39 127	12 6	949 118

Narail and Magura Local Boards in Jessore, and the Khulna and Bagerhat Local Boards in Khulna, held less than twelve meetings, the number of meetings held by the Jangipur Local Board, viz., five being specially unsatisfactory. The average attendance of members was lower in the Local Boards of Alipore, Krishnagar, Ranaghat, Berhampore, Kandi, Jangipur, Jessore, Bongaon, Jhenidah, Magura, Khulna, Bagerhat and Satkhira.

128. The following statement shows the ordinary income of each District

Board, including grants for Provincial works, and the expenditure incurred on civil works, sanitation and water-supply, medical relief and education

for the past two years:-

		0-15			EXPENDIT	TURE ON-		
DISTRICT.	Year.	Ordinary income, including grant for Provincial works, if any.	Civil works, including Public Works establish- ment.	Sanitation and water- supply.	'Medical relief.	Primary education.	Education other than primary.	Total education.
1	2	3	4	5	6	7	8	9
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
24-Parganas {	1897-98 1898-99	2,59,546 2,66,232	1,72,184 1,93,419	10,114 6,254	1,811 3,343	32,388 33,289	12,917 12,921	45,30 46,21
Nadia {	1897-98 1898-99	1,15,270 1,24,849	70,474 65,843	1,241 1,728	1,987 1,656	19,272 17,753	12,966 12,696	32,238
Murshidabad {	1897-98 1898-99	90,109 93,865	53,098 54,083	6,118 2,313	1,310 1,650	15,530 14,166	4,915 4,596	20,446 18,762
Jessore {	1897-98 1898-99	2,00,133 1,74,566	1,43,456 1,27,283	5,828 719	5,413 5,005	19,629 19,697	7,118 8,518	26,747
Khulna {	1897-98 1898-99	1,12,022 1,11,584	55,003 63,435	6,482 5,677	4,194 4,243	16,764 17,038	12,068 10,094	28,832 27,132

The expenditure on civil works increased in the 24-Parganas, Murshidabad and Khulna, while it fell off in Nadia and Jessore, all the District Boards except Nadia have reduced their expenditure on sanitation and water-supply, the reduction is marked in the 24-Parganas, Murshidabad and Jessore. This is not satisfactory. The District Boards of the 24-Parganas, Murshidabad and Khulna have spent more on medical relief than in the preceding year. The expenditure on primary education increased in the 24-Parganas, Jessore and Khulna, while it fell off in Nadia and Murshidabad, and that on education other than primary increased in the 24-Parganas and Jessore only.

Municipalities.

130. There was no change during the year either in the number of municipalities in the Division which remained the same, viz., 40, or in their constitution. The elective system is in force in all the municipalities except Garden Reach, Titagar, Garulia, Chakdaha, Khulna and Debhata, where the Commissioners are appointed by Government; while in the municipalities of Garden Reach, Baruipur, Santipur, Garulia, Barnagore, Chakdaha, Kandi and Moheshpur, the Chairman is appointed by Government. At Jangipur the Municipal Commissioners on the resignation of their Chairman, Babu Krishna Ballab Ray, took the wise step of getting Babu Chandra Nath Ghosh, the Sub-divisional Officer, appointed as their Chairman, and the results are reported to be already beneficial. During the year general elections were held in the municipalities of Cossipore-Chitpur and Manicktola, and great interest was displayed in choosing the representatives. There were altogether seventeen bye elections held during the year, of which one failed in Kumarkhali and two in Murshidabad; the vacancies were filled up by the appointment of Commissioners under section 16 of the Municipal Act. The following table shows the total

income, including balance and expenditure of the municipalities in different districts, as compared with the preceding year:—

DISTRICT.		Inc	ome.	Expen	diture.	REMARKS.
		1897-98.	1898-99.	1897-98.	1898-99.	The second second
1		2	. 3	4	5	6
		Rs.	Rs.	Rs.	Rs.	1
24-Parganas		4,99,900	5,53,322	4,21,547	4,72,701	
Nadia		1,19,605	1,62,858*	1,07,311	1,16,718	*Including a loan
Murshidabad		1,05,148	1,07,508	94,257	97,202	of Rs. 28,000 taken from
Jessore		31,656	27,293	29,389	25,869	Govern men by the Krish
Khulna	••••	27,041	32,516	21,003	25,259	nagar Munici-
Total		7,83,350	8,83,497	6,73,507	7,87,749	
Increase		1,00,147	The second second	64,242		
Decrease						(Arts) monage

131. There was an increase, both in the receipts and disbursements, in all the districts except Jessore, where there was a decline in both. The increase in receipts is chiefly due to improvement in the collections resulting from stricter supervision and partly to the inclusion of the amount of the loan of Rs. 28,000 taken by the Krishnagar Municipality for the improvement of the drainage of the town. The rise in expenditure is a natural consequence of the improvement in the receipts. The following statement shows the number of meetings held in each municipality during the past two years and the average percentage of attendance of Municipal Commissioners at each of them:—

NAME OF A	IUNICIPALITY.	Number held	of meetings in —	attendan	ercentage of ce at each ting.	REMARKS
		1897-98.	1898-99.	1897-98.	1898-99.	
Cossipore-Chitp Maniktala Baranagore South Suburba Rajpur Baruipur Joynagore South Dum-Du North Dum-Du South Barracky North Barracky Barasat Naihati Gobardanga Basirhat Baduria Taki Titagar Garulia Garden Reach Krishnagar Santipur Ranaghat Nadia Kushtia Kumarkhali Meherpur	n	30 15 14 17 10 24 16 14 18 16 13 17 18 11 20 14 16 16 12 12 12 19 27 21 16 28 23 16	26 24 17 14 16 19 16 12 23 13 8 15 18 9 17 16 12 16 13 9 15 13 9 15 22 23 17 16 22 23 17 16 22 23 17 16 20 20 20 20 20 20 20 20 20 20 20 20 20	64·7 61·3 71·4 33·3 69·0 66·2 56·2 66·0 67·8 51·7 61·02 63·0 61·1 51·5 50·0 52·08 38·8 56·9 73·1 65·2 63·1 40·3 28·06 49·3 17·8 34·7 38·1	76·6 62·9 59·9 33·3 58·1 68·4 43·7 57·4 57·4 57·4 39·7 57·5 47·0 48·1 33·3 50·9 70·5 43·5 61·1 67·5 56·4 73·3 42·4 29·3 43·3 17·0 35·2 25·5	

NAME OF M	UNICIP	ALITY.		f meetings in—		ercentage of ce at each ting.	Remarks
			1897-98.	1898-99.	1897-98.	1898-99.	
Birnagar			14	12	50.8	43.9	
Chakdaha		•••	16	20	45.0	31 0	
Berhampore			17	20	46.6	40.8	
Murshidabad			22	17	56.9	45.8	
Jangipur	•••	•••	15	13	33 3	41.6	
Kandi			22	11	59.09	50.9	
Azimganj			21	21	466	41.2	
Jessore		•••	14	21	51.2	59.1	77.15 EL.
Kotechandpur			21	25	42.8	47.5	
Moheshpur			22	18	59.69	58.3	- Gererie
Khulna	•••		20	20	33.5	33.5	2
Satkhira		•	16	15	53.1	54.1	
Debhatta			19	20	50.0	44.6	

132. In 18 out of the 40 municipalities, the average percentage of attendance was over 50, against 25 municipalities showing such a percentage in the year 1897-98 and 21 and 13 in the two preceding years. The result is therefore not satisfactory when compared with the figures of the preceding years. The percentage was specially high in the municipalities of Cossipore-Chitpur, where it was 76.6, and Krishnagar, where it was 73.3. The lowest percentage was again attained by the Kushtia and Ranaghat Municipalities, where the percentage was 17.0 and 29.3, respectively, against 17.18 and 28.06 of the preceding year. The following are some of the important works of improvement executed by several of the municipalities during the year. In Cossipore-Chitpur 5,039 feet of 2"-pipes were laid, nine hydrants erected, four standposts purchased, nine platforms constructed, and sundry stores, fittings, &c., supplied for the maintenance of the water-supply system at a total cost of Rs. 2,902. Roadside nikasi drains were constructed in different parts of the town to the extent of 3,407 feet at a total cost of Rs. 4,871. Certain fair-weather roads received the first coat of metal during the year at a cost of Rs. 1,157, and particular attention was paid to busti improvement and sanitation. In Manicktola 2,598 feet of filtered water-pipes were laid and six additional hydrants provided at a cost of Rs. 2,017; 2,017 feet of patent stone saucer drains were constructed at a cost of Rs. 2,166, and an office building with an outdoor dispensary has been started and is fast approaching completion at an estimated cost of Rs. 12,600. In Berhampore, the water-works for the supply of filtered water to the residents were nearly completed by the end of the year, at a cost of about rupees two lakhs and-a-half, given by the late Maharani Surnomoyi. The water-works have since been completed and opened by His Honour the Lieutenant-Governor on the occasion of his recent visit to Berhampore.

134. The remarks recorded by me in the previous year's report still generally apply. The only satisfactory feature in the municipal administration during the year is the improvement in the matter of collection due to special pressure put by me upon the Municipal authorities. Want of supervision and a general reluctance on the part of the municipal executive to resort to coercive measures, caused by the fear of becoming unpopular, and consequent laxity in the observance of the rules, still prevail, but the constant issue by me of orders and circulars and the close watch kept by myself and the Magistrates on their working have produced the improvement indicated by the figures, particularly in some important municipalities which are most backward in this respect, such as Krishnagar, Santipur, South Suburban, etc., etc. To enforce responsibility in this respect I thought it fit to establish a system of a sliding scale of punishments and rewards for bad and good collections. It remains to be seen whether this system will prove effective. I have been strictly enforcing the said system and expect to show better and more satisfactory results in the next report.

XXXII.-POST-OFFICES AND TELEGRAPHS.

136. The subjoined table shows the number of post-offices and the number and mileage of the mail lines during the year under report :-

			BER OF		5		MAIL	Lines.	462	a significant
District.		No.	j.		. In	aperial.	Zam	indari.	T	otal.
		Imperial.	Zamindari.	Total.	Number.	Average mileage.	Number.	A verage mileage.	Number.	Average mileage.
1		2	3	4	5	6	7	8	9	10
24-Parganas Nadia Murshidabad Jessore Khulna	::	87 97 50 75 59	9 6 5 6 5	96 103 55 81 64	45 10 15 4	$\begin{array}{c}\\ 313\frac{1}{2}\\ 169\frac{1}{2}\\ 126\\ 9 \end{array}$	12 17 20 14	143 237 170 22	56 57 27 35 18	396 456 406 296 31

The number of Imperial post-offices increased in all the districts except Jessore, where it remained stationary. The increase in the 24-Parganas is considerable, being from 65 to 87. There was no change in the number of zamindari post-offices in any district. The mail lines increased by one in number in each of the districts of the 24-Parganas and Nadia; in Murshidabad and Jessore the number remained the same as in the previous year, while in Khulna it decreased from 43 to 18. There was a large decrease in the average mileage in the 24-Parganas, Nadia and Khulna.

137. The following statement shows the number of letters, etc., received

for despatch and issued for delivery during the year:-

DISTRICT.		Number of letters, etc., in 1897-98.	Number of letters, etc., in 1898-99.
24-Parganas		12,915,474	14,030,198
Nadia	•••	5,613,456	6,273,094
Murshidabad	***	(Not given)	(Not given)
Jessore Khulna	***	772,980	4,948,916
Ruuna	•••	(Not given)	(Not given)

138. The statement below shows the working of the general telegraph offices during the past two years :-

Dis	TRIC	т.			Number of contelegrap	nbined post and h offices.	Messag	ces sent.	Messages	received.
					1897-98.	1898-99.	1897-98.	1898-99.	1897-98.	1898-99
90x 97x 4xx	1				2	3	4	5	6	7
24-Parganas Nadia Murshidabad Jessore Khulna				11111	18 6 4 5 3	18 6 4 5	25,820 4,018 4,198 2,083 2,974	23,318 4,140 3,677 2,140 3,617	23,778 4,922 3,908 2,173 3,022	24,578 5,222 3,781 2,538 2,759
		1	otai	***	36	36	39,003	36,892	37,803	38,87

139. The number of combined post and telegraph offices in each district remained the same as in the preceding year. The messages sent in Nadia, Jessore and Khulna and those received in the 24-Parganas, Nadia and Jessore increased in number. A telegraphic line has been constructed between Basirhat and Satkhira. It is reported to be complete, and will be opened soon to the public This will reduce, in some respect, the difficulties of rapid communication with Satkhira, as noticed in my last report.

The relations between the District Boards in the Division and the Education Department continued to be cordial. There was no friction between them. The suggestions made by the officers of the Education Department were generally accepted. The Chairman of the District Board of the 24-Parganas has, however, in a representation to the Director of Public Instruction protested against the elimination of mensuration and zamindari and mahajani accounts from the Lower Primary Scholarship examination. I agree with his views in the matter, as the subjects are of vital importance to the children of the masses.

XXVII.-DISPENSARIES AND HOSPITALS.

117. There were 66 dispensaries and hospitals in the Division, or one more than in the previous year, the dispensary at Mollahat in the district of Khulna having been newly added to the list. The following statement shows the number of dispensaries in each district and the number which receive both indoor and outdoor patients or outdoor patients only:-

District.		Number of dis- pensaries receiv- ing both in and out-patients.		Total number of dispensaries.
* 1		2	3	4
24-Parganas		10	20	30
Nadia	• • • •	6	5	11
Murshidabad	•••	6	2	8
Jessore	• • • •	4	5	9
Khulna		3	5	8
Total		29	37	66

118. In the 24-Parganas the number of dispensaries remained the same as in the previous year (viz., 30). It appears that the Sambhunath Pandit Hospital in Bhawanipur, the Alipore Police Hospital, and the Alipore Reformatory School hospital have been excluded from the list, while the newly opened dispensary at Budge-Budge and the dispensaries at Maniktala and South Dum-Dum, which had been erroneously excluded from previous lists, have been added to the list for the first time. No explanation has been submitted by the Magistrate as to why the three first-named dispensaries have been excluded from the list. The most important hospitals in this district are the Sagore Dutt hospital at Kamarhati and the North Suburban Hospital at Cossipore, the number of in-patients treated in them being 731 and 490 respectively, and the number of out-patients 13,556 and 7,745. Among the outdoor dispensaries, Chitpur stood first, the number of patients treated during the year being 11,011, Nimta second, the number of patients being 8,682, and Chetla third, the number being 6,132. Most of the dispensaries show a falling off in attendance, partly owing to the plague scare, which specially affected the dispensaries in the suburbs of Calcutta during the months of April, May and June, and partly owing to the improved healthiness of the year. The dispensaries at Barisa, Baruipur and Taki were badly managed. The management of the last-named dispensary has been taken over by the District Board from the 1st April 1899.

In all the dispensaries in the district there are arrangements for waiting rooms for females. The total income of the dispensaries was Rs. 58,241, of which the municipalities contributed Rs. 17,743, the District Board Rs. 2,479, and Government Rs. 3,952. The balance Rs. 34,067, was met from private subscriptions, endowments, etc. The total expenditure amounted to Rs. 56,562.

119. The following statement shows the working of the Lunatic Asylums at Bhowanipur and Dullunda and the Campbell Hospital at Sealdah:—

Name of Institution.	Average number of patients treated daily.		Cost incurred by Government.	
	1897.	1898.	1897.	1398.
1	2	3	4	5
			Rs	Rs.
Bhowanipur Lunatic Asylum Dullunda ditto Campbell Hospital	37 246·7 * 813·8	36·9 218·3 552 8	21,192 32,061 1,21,893	20,809 26,696 1,55,279

120. In Nadia the most important dispensaries are those at Krishnagar, Meherpur and Kushtea, the number of indoor patients treated in them being 306, 24, and 70, respectively, and outdoor patients 8,084, 4,499 and 3,915. Among the outdoor dispensaries Ula or Birnagar stood first, the number of patients treated in it being 4,706, and Chuadanga second, the number of patients being 3,928. The total attendance in the dispensaries rose from 38,978 to 42,171. The income of the dispensaries amounted to Rs. 13,660, of which the largest portion, viz., Rs. 8,535, was contributed by municipalities, Rs. 1,710 by the District Board, Rs. 244 by Government, and Rs. 3,171 were met from private subscriptions. The total expenditure was Rs. 12,682. Besides these, there are seven private dispensaries, of which the Church Mission Society's dispensary at Santirajpur afforded relief to 7,532 outdoor patients. The Ranaghat Medical Mission under Mr. James Monro, c.B., late of the Bengal Civil Service, also maintains a dispensary where a large number of both indoor and outdoor patients is treated. The others are (1) the new dispensary opened by Mr. Monro at Kaliganj, about 3 miles from Chakda; (2) the Natuda dispensary maintained by the Paul Chaudhurries of that place; (3) the Nistarini dispensary at Meherpore maintained from the assets of the property set apart for the purpose by the founder, Nistarini Gupta, and (4) the Munshiganj Garrett Charitable Dispensary maintained by local subscriptions.

do useful work, the number of in-patients being 257 and out-patients 13,059. The Berhampore and Murshidabad dispensaries treated 514 and 229 in patients and 11,189 and 13,761 out-patients. The Arnakali Zanana Hospital, which had been maintained by public subscriptions from the beginning of the year under review, was closed from the 1st October 1898, as it was not considered to answer the purpose of a Zanana Hospital for want of suitable arrangements. The Berhampore Municipality having promised to entertain the services of a qualified lady doctor, the savings effected and the residue of subscriptions collected and promised were devoted to erecting a female ward in the Berhampore dispensary compound. The total income of the dispensaries in the district was Rs. 25,473, of which the municipalities contributed Rs 10,103, the District Board Rs. 1,180, Government Rs. 1,142, and the balance, Rs. 13,048, was met from private subscriptions and endowments. The total expenditure was Rs. 24,968. There are three private dispensaries, one at Islampur and one at Lalgola, maintained by the local zamindars, and one at Saidabad, maintained by the late Rai Mukunda Lal Burman Bahadur. These dispensaries are well managed and supply a want felt by the people in the parts of the district where they are located. The last-named dispensary has done good work, and has been of great benefit to the poor.

122. In Jessore the dispensaries at Jessore, Magura, Narail and Kotchandpur afforded relief to both indoor and outdoor patients, and the rest to outdoor patients only. There was an increase in the number of indoor patients in the Jessore dispensary alone and decrease in all others. The number of outdoor patients increased at the Narail and Sridharpur dispensaries, but decreased in all others. The total income of all the dispensaries during the year was Rs. 9,554, of which the municipalities paid Rs. 3,651, the District Board Rs. 3,232, Government Rs. 928, and the balance, Rs. 1,743, was met from private subscriptions. The total expenditure was Rs. 9,528. There was besides a dispensary maintained by the Narail zamindars at Rupganj Bazar, Narail,

under the superintendence of an Assistant Surgeon.

123. In Khulna the dispensaries at Khulna, Bagerhat, and Satkhira afforded both indoor and outdoor relief and the rest outdoor relief only. The attendance of patients has increased considerably in all the dispensaries except those at Satkhira and Bagerhat. The total income of the dispensaries was Rs. 9,936, of which Rs. 2,396 were contributed by the municipalities, Rs. 4,415 by the District Board, Rs. 612 by Government, and the balance, Rs. 2,512, was met from other sources. Almost the whole of the income was expended during the year. Besides the above, two dispensaries are maintained by private individuals, viz., one at Nakipur maintained by Rai Hori Charan Rai Chaudhury Bahadur, the zamindar of the place, and the other at Morrellganj by Maharaja Durga Charan Law of Calcutta.

XXVIII.-LIBRARIES.

124. As reported in previous years, the public libraries in this Division are neither numerous nor important. In the 24-Parganas there is no public library worthy of mention. In Nadia there are six libraries:—(1) The Rivers Thompson Library at Ranaghat, which exists only in name; (ii) The Ranaghat Students' Library at Kanagnat, which exists only in name; (ii) The Ranagnat Students' Library, which is intended for students and the local public, for whom a reading-room is available every afternoon; (iii) the Vinapani Library at Harodham; (iv) the Issur Chunder Gupta Library at Kanchrapara; (v) the library attached to the Santipur High School, which is supported by the Municipality, and (vi) the library at Meherpore, maintained by the Mallik Babus of the place, which is reported to contain about 700 books. The only library in Munchidahad known as the Barbarnora Public Library is practically a book. in Murshidabad, known as the Berhampore Public Library, is practically a book club. During the year under report the building in which the public library at Jessore was located was sold for want of funds to maintain it and the proceeds held in the Savings Bank to the credit of the library. It is reported that the amount of local subscription is too small to maintain a librarian and a peon, and though attempts were made during the year to increase the number of subscribers, they were unsuccessful. The pleaders, who represent the reading public, do not care much for this library. The Government school at Jessore has a small library attached to it for the use of the teachers and pupils of that institu-The civil officers and other members of the European community at the sadar station have a club in which English journals are imported from England. Besides these, there are two other libraries, one at Magura and the other at Kalia, which are maintained by local subcriptions. As stated in the last year's report, there are several small libraries at Satkhira, Sripur, Magura, Khesra and Bagerhat, maintained by funds locally raised. A small library has been opened at Kukrul during the year. The Khulna Library depends on monthly subscriptions and donations paid by the public. The district and the subdivisional libraries are reported to be in good order.

XXX .- LOCAL SELF-GOVERNMENT INSTITUTIONS.

126. The year under report was the thirteenth of the operation of the Bengal Local Self-Government Act, III of 1885, in this Division. There was on change in the constitution of the 5 District Boards or the 22 Union Committees. The Local Boards were reconstituted towards the close of the year, the number of Local Boards having increased from 19 to 20, owing to the re-establishment of the Chuadanga Local Board. The following statement

shows the number of meetings held by each District and Local Board and the average attendance of members at each meeting:—

District Boards.

DISTRICT.	Number o	f meetings	Average attendance at each meeting.		
	1897-98.	1 8 98-99.	1897-98.	1898-99.	
1	2	8	4	5	
24-Parganas Nadia Murshidabad Jesore Khulna	15 18 9 20 12	12 15 6 12	16·8 12·8 12·2 15·9 10·5	15·9 13·0 10·0 13·9 8·8	

Local Board's.

DISTRICT.	Name of Local Board	he	Number of meetings held.		Average attendance at each meeting.	
District.	Name of Local Board	1897-98.	1898-99.	1897-98.	1898-99.	
1	2	3	4	5	6	
24-Parganas {	Alipore Diamond Harbour Barasat Basirhat	16 12	12 14 16 8	7·6 5·6 7·0 3·5	6·7 6·2 8·2 4·2	
Nadia	Krishnagar Meherpur Kushtea	9	8 8 11	4·2 4·1 4·1	4·0 5·0 4·2	
	Chuadanga Ranaghat Berhampore	11	 8 6	5·8 9·2	4·8 5·3	
Murshidabad	Kandi Jangipur Jessore	9	9 5 16	7·3 5·7 4·9	5·5 3·6 4·2	
Jessore {	Bongaon Jhenida Narail	10	11 9 10	6.9 5 0 5 4	4·1 3·0 6·8	
Khulna {	Magura Khulna	13 10	10 9 8	5·3 5 7 6·0	5·0 5·0 5·5	
A THUING	Satkhira	4	13	7.7	5.0	

127. The number of meetings held by all the District Boards except Khulna fell off during the year. The District Board of Murshidabad held only six meetings as against nine in the previous year. The Chairman explains that as there is considerable cost in travelling allowance to be incurred, meetings are not called unless there is business to be transacted. The average attendance of members at each meeting was lower in all the districts except Nadia, where it slightly improved. The Local Boards in the districts of Nadia and Murshidabad, the Basirhat Local Board in the 24-Parganas, the Bongaon, Jhenidah,

FAIRS.

143. The most important fairs held in the 24-Parganas are the Gangasagar mela, Pir Gora Chand's mela and Ghazi Saheb's mela. The Gangasagar fair, which is a Hindu bathing festival, lasted from the 12th to the 14th January, the number of persons who attended it being 24,500, against 40,000 in the preceding year. The decrease in the number of pilgrims is due to the plague scare. Sanitary and conservancy arrangements were as usual made by the District Board. A hospital with a dispensary in charge of a Civil Hospital Assistant was provided. There were 93 cases of dyspepsia, diarrheea and fever, which were all successfully treated, and five cases of cholera, which ended fatally. Pir Gora Chand's mela was held at Harwa in the Basirhat subdivision and Ghazi Saheb's mela at Bansra in the Sadar subdivision. The number of pilgrims attending them amounted to 90,000 and 25,000 respectively. Sanitary arrangements were made partly by the District Board and partly by the owners of the lands. The arrangements made in the latter fair were not satisfactory. The principal fairs held in Nadia were the Ras Jatra at Santipur, the Dol Jatra at Ghosepara, and the Pat mela at Kulia. The Gan mela held at Navadwipa may also be noticed as important. The number of persons attending these fairs aggregated 25,000, 50,000, 15,000 and 16,000 respectively. Sanitary and conservancy arrangements in these fairs were made either by the local municipalities or by the owners of lands in which the fairs were held. In the Gan mela at Navadwipa they were made by the Navadwipa Lodging-house Committee. There was no outbreak of cholera or other epidemic disease at any of the melas except one case of cholera at the Ghosepara mela, which was cured. The Municipal fairs in Murshidabad are the Tulsi Bihar mela at Raghunathganj and the Kapileshwar mela at Saktipur, each lasting for nearly a month, and the number of persons attending daily are 6,000 and 5,000 respectively. No fair of any importance was held at Jessore or Khulna.

FERRIES.

147. The following statement shows the income from ferries under Government, under the District Boards and municipalities in this Division for the past two years:—

Distric	r.	Year.	Income from Government ferries.	Income from District Board ferries.	Income from Municipal ferries.	Remarks.
1		2	3	4	5	6
24-Parganas Nadia Murshidabad Jessore Khulna		1897-98 1898-99 1897-98 1898-99 1897-98 1898-99 1897-98 1898-99 1897-98	Rs. 23,780 22,800 3,794 3,244	Rs. 20,224 21,590 3,263 3,063 7,986 8,195 9,172 7,860 7,681	Rs. 3,489 3,531 Nil. Nil. 10,970 8,436 421 212 44	
Total	{	1897-98 1898-99	27,574 26,044	48,326 49,369	14,924 12,223	

There has been a net increase of Rs. 1.043 in the income of ferries under the District Boards. The increase is shared by the 24-Parganas, Murshidabad and Khulna, while Nadia and Jessore show a decrease.

XXXVI .- CONDUCT OF ZAMINDARS.

152. As reported last year, none of the principal zamindars in the district of the 24-Parganas reside on their estates. They manage their estates through local agents who are generally not well disposed towards their tenants. The Collector, however, reports that the behaviour of the zamindars of his district during the year under report was on the whole good, and that no case of oppression was brought to his notice during the year. The principal resident zamindars of the district are the Mukerjis of Gobardanga, the Chaudhuris of Baruipur and the Mandals of Bawali. The Chaudhuris of Baruipur evince a keen interest in the welfare of their tenants. An unfortunate quarrel, which broke out between the brothers of the Gobardanga family, led to the institution of criminal proceedings under section 107 of the Criminal Procedure Code, but the Subdivisional Officer of Barasat succeeded in effecting an amicable settlement. Towards the end of the year, however, a bad riot took place in the Basirhat subdivision. Among the non-resident zamindars, the heirs of the late Babu Prosad Das Dutta, the Manager of the Shovabazar Raj Estate, Maharaja Benoy Krishna Deb Bahadur, Rai Manmatha Nath Mitter Bahadur and Maharaja Durga Charan Law treated their tenants well. The Dhankuria zamindars of Basirhat are reported to be model zamindars. They maintained a high English school, a Sanskrit tol and a dispensary entirely at their own cost and were always ready to subscribe to any works of public utility. In Nadia, excepting the Maharaja, there are very few landlords of any standing. Most of them are absentees or new men of comparatively low caste who, it is reported, think more of squeezing all they can out of their tenants than of improving their estates. The utbandi system, which is prevalent in most parts of the district, is a source of great oppression in the hands of such men. The Maharaja of Nadia is a mild landlord, generally kind and considerate towards his tenants. Minor acts of oppression committed by the local agents of zamindars are by no means rare, though it is difficult to establish the complicity of the zamindars in them by direct evidence. But, as the Collector reports, there can be no doubt that they are really responsible for such acts, as they must be perfectly well aware that the pittances they dole out to their servants are quite insufficient to support them, and that they are certain to supplement them by illegal exactions from the raiyats. In Murshidabad the Nawab Bahadur continues to keep up his reputation for liberality and loyalty towards Government. Notwithstanding the heavy expenditure incurred by him in repairing the damage done by the earthquake of June 1897 to the palace and other Nizamat buildings, he is always found ready to subscribe to deserving objects. The Maharaja of Kasimbazar, Manindra Chandra Nandi, who got his title in the year under report, is reported to be an intelligent landlord likely to maintain the traditions of the Raj by his already well known liberality. He is bearing the remaining cost of the Berhampore water-works. Rao Jogendra Narayan Rai of Lalgola is a rich and liberal zamindar who has given about Rs. 10,000 for a tank and a public hall in Jangipur, and is about to construct a landing ghat in Gorabazar. He keeps up a private dispensary. Raja Ashutosh Nath Ray, lately under the Court of Wards, has been made a Raja during the year. The Hon'ble Raja Ranajit Sing Bahadur of Nashipur is said to have rendered good service to Government as President of the Lalbag Bench during the early portion of the year under report. The other zamindars of the district who have been favourably mentioned are (1) the late Rai Makund Lal Burman Bahadur, (2) Rai Setal Chand Nahar Bahadur, (3) Rai Manilal Nahar Bahadur, (4) Babu Charu Krishna Majumdar of Islampur, (5) Rai Budh Sing Dudhuria of Azimganj, (6) Babu Dwarkanath Chaudhuri of Nimtila (Jangipur), (7) Munshi Ziilar Rahaman of Talibpur (Kandi), (8) Chaudhuri Keramatulla of Salar, (9) Munshi Mehdi Hossein of Sijgram and (10) Babu Bhagobati Charan Ray of Jangipur. Mr. Egerton reports that on the whole the attitude of the zamindars of Murshidabad is loyal towards Government and good towards their tenants. In Jessore the principal zamindars in the Sadar subdivision are (1) the members of the Chanchra Raj family and (2) the Ramnagar Ghosh Chaudhuris. No instance of oppression on their raivats was brought to notice during the year. In Narail the principal zamindars are non-residents who manage their affairs through local agents, and the police and the Magistracy there have to be

on the alert to keep these agents from oppressing the raiyats. In Magura the principal zamindars are the Rajas of Dighapatia and Naldanga, the Narail Babus and Mr. Tweedie of Madhupur in Jhenida. To curtail expenditure the Raja of Dighapatia abolished a charitable dispensary at Bunagati which was doing good work. The Raja of Naldanga is said to take interest in the welfare of his tenants. He contributes liberally towards the maintenance of a charitable dispensary and a school, and gave a sum of Rs. 150 towards the construction of a public latrine in Magura town in the year under report. In the Jhenida subdivision the principal zamindars are the Narail Babus and the Raja of Naldanga. It is reported that cases of oppression by the agents of the Narail Babus occasionally come before the authorities and are suitably dealt with. From a memorial submitted to Government by some raivats complaining against the malpractices and other acts of oppression of Bihari Lal Sarkar, the naib of the Narail Babus at Sabdalpur, it appears that the man has not been removed from their service though it was reported last year that the man had been removed. The Magistrate has been asked to report on this. In the Bongaon subdivision the principal zamindars are Babus Hari Charan Bose, Girija Prasanna Mukherji of Gobardanga, Kali Prasanna Ghosh of Calcutta, Jogendra Nath Maulik and Sir Maharaja Jatindra Mohan Tagore, Bahadur, K.C.S.I., of Calcutta, Babu Kumar Nath Ray of Krishnagar and Babus Radharaman and Kishori Mohan Shaha of Pabna. The relations between the raiyats and the landlords in the Jessore district were on the whole satisfactory during the year. The Magistrate speaks very highly of the services rendered by Mr. Shirreff on the Sinduria concern and of his acting manager, Mr. Macdonell, in assisting the Subdivisional Officer of Jhenida in settling and deciding disputes, the raiyats preferring to have their cases decided by Mr. Shirreff in his zamindari cutcherry rather than go to the trouble and expense of coming to subdivisional head-quarters. In Khulna almost all important zamindars are absentees, having local agents to manage their affairs. The Collector reports that these agents are on the whole law-abiding and none of them had any serious friction with the tenants. Of the resident zamindars the most important are (1) Rai Hari Charan Chaudhuri of Nakipur in the Satkhira subdivision, and (2) Srimati Kamal Kumari Chaudhurani in the Bagerhat subdivision. The former maintains a charitable dispensary, has recently come forward with a large donation for the Khulna charitable dispensary, and is well such as the latter of the latte dispensary and is well spoken of: the latter is not favourably regarded. Of the non-resident zamindars, the Hon'ble Mr. Justice Chunder Madhab Ghose, who has zamindaris in the Satkhira subdivision, helped his tenants during the last scarcity and deserves mention.

XXXVII.-GENERAL REMARKS.

153. The year under report was not of an eventful or unusual character like the one which preceded it. Owing to a sufficient and well distributed rainfall, there was generally a bountiful harvest which enabled the people, in a large measure, to recover their lost position of comfort and prosperity. The general health of the public was satisfactory, and no disease appeared in any of the districts of this Division in an epidemic form, excepting in Jessore, where the public health suffered in the rains and early part of the cold season. The plague which reappeared in Calcutta in October last and which, it was feared, might break out in an epidemic form with all its virulence in the districts of this Division, happily did not appear in any of the districts excepting in the 24-Parganas and Nadia, where a few sporadic cases occurred.

RESOLUTION ON THE REPORT OF THE BOARD OF REVENUE ON THE LAND REVENUE ADMINISTRATION OF THE LOWER PROVINCES FOR THE YEAR 1898-99.

REVENUE DEPARTMENT—LAND REVENUE. Calcutta, the 17th November 1899. RESOLUTION—No. 4014L.R.

READ-

The Report of the Board of Revenue on the Land Revenue Administration of the Lower Provinces for the year 1898-99.

The Report was submitted to Government with commendable punctuality on the 15th August.

COLLECTION OF LAND REVENUE.

2. Financial results.—The current demand on account of the land revenue in Bengal for the past five years is shown below:—

CLASS OF ESTATES.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.
1	2	3	4	5	6
I.—Permanently-settled estates II.—Temporarily-settled estates III.—Estates held direct by Government.	Rs. 3,22,61,833 28,21,520 34,84,498	Rs. 3,22,82,525 28,35,046 35,25,890	Rs. 3,23,02,286 28,94,880 35,55,897	Rs. 3,23,03,784 29,17,553 36,96,820	Rs. 3,23,19,810 31,65,981 39,02,484
· Total	3,85,67,851	3,86,43,461	3,87,53,063	3,89,18,157	3,93,88,275

There was an increase in the total current demand of Rs. 4,70,118. The increase in class I was due to the transfer from class II of certain estates in Chittagong which have been declared not liable to re-assessment. That in class II was due almost entirely to the recent settlements in Orissa, and in class III to various petty revisions of rent roll, and to the increase in the bhaoli rents in Gaya.

3. The demands, collections, and balances of land revenue for the same period are shown in the following table:—

YEAR.		DEMANDS.	BALANCES.		DEMANDS.		COLLECTIONS.		s.	e of total us (co- con total (column	of total s (co- on cur- lemand	lections 5) on demand	
	Current.	Arrear.	Total.	Current,	Arrear.	Total.	sions.	Current.	Arrear.	Total.	Percentage of collections lumn ?) on demand (co	Percentage collections lumn 7) rent d (column 2)	rent coll (column d current d
1	2	3	204	5	6	7	8	9	10	n	12	13	14
1895-96	 Rs. 3,85,67,851 3,86,43,461 3,87,53,663 3,89,18,157 3,93,88,275	Rs, 15,66,095 12,72,463 13,02,152 14,30,224 16,52,643	Rs. 4,01,33,946 8,99,15,924 4,00,55,215 4,03,48,381 4,10,49,918	Rs. 3,72,10,247 3,75,73,616 3,74,86,106 3,74,92,944 3,80,34,415	Rs. 12,90,078 9,99,576 9,96,831 11,56,411 12,62,524	Rs. 3,85,99,325 3,85,73,192 3,84,82,997 3,86,49,355 3,92,96,939	* Rs. 86,741 87,220 1,73,202 1,49,254 1,93,850	Rs. 13,27,462 10,44,892 12,13,432 13,21,146 12,61,944	Rs. 2,10,418 2,10,620 1,85,644 2,28,626 2,88,185	Rs. 15,37,880 12,55,512 13,99,676 15,49,772 15,50,129	95°95 96°63 96°07 95°79 95°75	99'54 29'81 59'30 99'31 99'76	96'48 97'23 96'73 96'34 96'56

4. Collections, balances, and remissions.—The total demand increased by Rs. 6,92,537 in comparison with that of 1897-98, and the total collections by Rs. 6,47,584. The remissions, however, exceeded those of the previous year by Rs. 44,596, and so the total balance at the end of the year had only increased by Rs. 357. The percentage of arrear collections went down from 80.86 to 76.39, though absolutely they increased by a lakh. The total balance, arrear and current, outstanding at the close of the year represented a percentage of 3.77 on the total demand as compared with 3.84 in 1897-98. Of this, 94.9 per cent. was good and recoverable.

Of the total amount of land revenue remitted during the year no less than Rs. 1,89,793 related to estates held direct by Government. The remissions of grace, amounting to Rs. 1,32,264, were considerably higher than in the preceding year, when they had been granted to the extent of Rs. 18,580 only. They were sanctioned mostly in Chittagong (Rs. 1,22,346) on account of the serious damage done by the cyclone and storm-wave of the 24th October 1897. The remissions under this class in other districts were, as usual, allowed to tenants of Government estates on account of failure of crops and of the death, desertion, or poverty of the raiyats. The remissions of right amounted to Rs. 39,511 as against Rs. 1,20,452 during 1897-98, and were chiefly due to diluvion, release of estates to private zamindars, and acquisition of land for public purposes. The nominal remissions rose from Rs. 10,222 to Rs. 22,075,

of which Rs. 15,095 were in Backergunge alone.

5. Permanently-settled estates.—Out of a total demand, current and arrear, from estates in class I of Rs. 3,27,89,770, the sum of Rs. 3,24,08,541 was realised. The percentage of the collections on the demand, after excluding from the demand sums the recovery of which was in suspense, and adding to the collections sums realised but not credited during the year, amounted to 99.21 per cent. as against 99.11 in the preceding year and 99.21 in 1896-97. The current collections fell short of the standard of 99 per cent. in 14 districts, of which 6, however, collected more than 98 per cent. The districts which collected less than 98 per cent. of the current demand were Jessore, Noakhali, Palamau, Ranchi, Muzaffarpur, Manbhum, Chittagong, and Darjeeling. In Darjeeling, excluding a demand of Rs. 474, the true balance was nil. In Jessore Rs. 13,732 were due from the Sridharpur Ward's Estate for the last two kists of the year, owing to a temporary stoppage of collections during change of management. A sum of Rs. 2,455 was recovered shortly after the close of the year. In Noakhali a sum of Rs. 11,107, out of the total balance of Rs. 11,169, was due from Chakla Bamni, which has been purchased on behalf of Government but has not yet been settled. In Palamau and Ranchi the balances were less than Rs. 1,000. Of Rs. 29,115 due in Muzaffarpur, Rs. 5,869 were paid during the year, but could not be brought to credit before its close, and Rs. 15,464 were on account of the last kist of the year, for which no coercive measure could be taken within the year. In Manbhum the entire balance of Rs. 3,165 was due from the Patkum Encumbered Estate. In Chittagong the balance of Rs. 38,698 was due to the effects of the cyclone and storm-wave of October 1897.

The realisation of the arrear balances was less than 99 per cent. in 17 districts. In four of these the collections exceeded 98 per cent., and in six the arrears were triffing. Out of the total arrear balances of Rs. 46,199, no less than Rs. 33,788 is outstanding in the Patna Division, the largest defaulter being, as last year, the district of Shahabad (Rs. 27,442). It is explained that much of this amount is under recovery by the Certificate Procedure, because, when the estates were offered for sale in some instances there were no offers or but very low ones. This explanation is not understood, and a special report on the subject will be called for. Balances of over Rs. 1,000 were also due in the districts of Noakhali, Saran, Muzaffarpur, Darbhanga, Malda, and

Manbhum.

Collections, generally, both of the current revenue and the arrear balances, were excellent.

The total amount of land revenue remaining due from wards' estates at the close of the year was Rs. 56,652, a sum more than double that of last year. The balances in Jessore and Backergunge were due from the Sridharpur estate owing to the circumstances stated above. In Burdwan, Rs. 11,472 were due from estates belonging to the Burdwan Raj, and will be adjusted against the surplus payment made by the Raj for other estates. These arrears were detected during the enquiry into the Burdwan tauzi frauds. Rupees 9,770, out of the total balance of Rs. 9,776 in Shahabad, was due from the Mahula estate, the reason assigned for its failure to pay being lack of funds. The explanation can scarcely be accepted as a final one, seeing that a similar default has occurred in each of the two preceding years and steps must now be taken to prevent a recurrence. In Chittagong, Rs. 7,213 are due from three

Wards' estates which incurred serious loss in the cyclone and storm-wave of October 1897. In Saran steps are being taken by the Collector to open separate accounts in all estates in which the Wards hold shares. In Muzaffarpur, of Rs. 4,186 due, Rs. 3,364 were paid up within the year, but not credited

before its close. In Patna, the delay in the payment of the balance (Rs. 2,206) was due to the sudden death of the General Manager.

6. Temporarily-settled-estates.—The total demand, current and arrear, from temporarily-settled estates amounted to Rs. 34,93,772 as against Rs. 31,99,444 during the previous year, and the total collections to Rs. 31,55,544 in comparison with Rs. 28,78,277 in 1897-98. The percentage of total collections on the total demand was 90.31 as against 89.96 in the previous year and 91.08 during 1896-97. The results of collections in each subdivision of this class during the year under report, as well as for the preceding year, are given

CLASSIFICATION OF ESTATES.	Year.	Percentage of current collections on current demand.	Percentage of arrear collections on arrear demand.	Percentage of total collections on total demand.
1	2	3	. 4	5
II. (a)		April 1970	3	
Settled for periods with proprietors {	1897-98	92·35	96·59	92·59
	1898-99	93·0 1	91·82	92·92
Private estates leased to farmers for { Private estates leased to farmers for { II. (c)	1897-98	84·81	84·09	84·70
	1898-99	84·47	86·43	84·74
Government estates leased to farmers for {	1897-98	83·53	76·52	82·29
	1898-99	84·09	70·09	81·62
Total {	1897-98	90·29	86·56	89·96
	1898-99	91·07	83·07	90·31

The percentage of collections shows a slight improvement in classes II (a) and (b), and a falling off in class II (c), the general result being somewhat better than that of the previous year. The Lieutenant-Governor regrets that he cannot speak of the collections in temporarily-settled estates in the terms he has used about the permanently-settled districts. For a year of good harvests the collections were distinctly bad. Had the deficits occurred in the newly-assessed areas in Orissa, there might have been some excuse, but the worst occur in districts where there is practically no explanation, except the laxness of the collecting officers. If an assessment is unfair, it ought to be revised; but so long as its fairness is not impugned, its payment in ordinary seasons must be required with precisely the same punctuality as is properly insisted upon in all other business matters. In compliance with the orders issued by Government last year, the Board have submitted separately a report as to the best means of improving collections in Government and private estates leased to farmers, and orders have now been passed by Government, which will, it is hoped, effect an improvement.

In the last two Resolutions, Burdwan, Dacca, Hooghly, and Faridpur were referred to for failing to collect 50 per cent. of the current demand in private estates leased to farmers. The two former have dropped out of this

year's list, but Midnapore has been added.

The current collections in the districts of Bankura, Muzaffarpur, Darbhanga, and Bhagalpur in the case of Government estates let out in farm also fell short of 50 per cent. The standard of 95 per cent. fixed for current collections in temporarily-settled estates of all classes, was reached or exceeded in 17 districts only, of which 4, namely, Birbhum, Chittagong, the Sonthal Parganas, and Manbhum, realised their demands in full. Of the large balance of Rs. 99,295 in Puri, Rs. 98,329 are due from the Kotdesh Estate which will be taken under direct management, the proprietor having refused settlement. In Midnapore, Khulna, Backergunge, and Shahabad the outstanding balances are also large, as in the previous year. The collection of arrears was specially poor in the case of Government estates leased to farmers in the district of Shahabad (11.19), of private estates similarly held in Gaya (19.44), and of estates settled for periods with proprietors in Dacca (33.78).

7. Estates held direct by Government .- During the year under report there were altogether 2,817 estates held direct by Government, of which 2,578 were owned by Government as proprietor and 239 were private estates under Government management. The current demand increased from Rs. 36,96,820 to Rs. 39,02,484 and the total demand from Rs. 45,29,909 to Rs. 47,57,376, out of which Rs. 37,32,854, or 78.46 per cent., were collected and Rs. 1,89,793 remitted, leaving an unrealised balance of Rs. 8,34,729, or Rs. 25,499 less than

in the previous year.

The general results are compared below with those of the previous year in

each subdivision of this class:-

CLASSIFICATION OF ESTATES.	Year.	Percentage of current collections on current demand.	Percentage of arrear collections on arrear demand.	Percentage of total collections on total demand.
1	2	3	4	5
(a)				
Managed for proprietors {	1897-98 1898-99	80·45 89 62	82·02 77·84	80·77 88·01
(b)	11.2000			Y
Owned by Government as proprietor {	1897-98 1898-99	79·19 79·83	76·26 65·11	78·66 77·09
Total {	1897-98 1898-99	79·37 81·12	77·15 66·32	78·96 78·46

The percentage of current collections on the current demand increased and that of arrear collections on arrear demand decreased under both headings, the net result being that the percentage of total collections on the total demand fell from 78.96 in the previous year to 78.46 in the year under report. The standard of 90 per cent. for current collections in both classes was reached or exceeded in 18 districts as compared with 14 in 1897-98, while in four other districts as compared with one in the previous year it was exceeded in one class of estates only.

The results were very poor in Patna, where the percentages of current collections on the current demand were only 19:17 in the case of estates managed for proprietors and 65.46 in that of Government estates though explanations of these shortcomings are not given. In Jalpaiguri, the Lieutenant-Governor has again to notice the existence of very heavy arrears, which amounted to Rs. 1,63,625, the percentage of current collections on current demand having also fallen off from 62.96 to 56.31. It is, however, observed that the arrear collections were satisfactory. With a view to improve collections, the Lieutenant-Governor has recently approved the Board's proposals that, in case of default, the jotes of middlemen who pay more than Rs. 20 as rental should be subjected to sale under Act VII (B.C.) of 1868, and that the certificate procedure should be used for the recovery of arrears only in the case of actual cultivators paying Rs. 20 or less. He is however, disposed to acree with the cultivators paying Rs. 20 or less. He is, however, disposed to agree with the Commissioner that the short collections are due, in essence, to bad management. The system of officering these estates appears to be radically defective, and, in consultation with the Commissioner, an alteration of it is now being arranged. In Balasore and Palamau, which had been unfavourably noticed in the last two years, collections still continued to be poor, and the Lieutenant-Governor is disappointed to find that the Board of Revenue have ascertained and given no reasons whatever for the failure. From another source, it is gathered that in Palamau the supervision exercised by the tahsildar was lax. In both districts the Board are requested to see that decided improvement is made in the current year. In Chittagong, out of a total current demand of Rs. 5,35,446, Rs. 1,50,701 remained unrealised in consequence of the cyclone and storm-wave of October 1897. Arrear collections were worst in the districts of Midnapore, Dacca, Backergunge, Chittagong, Shahabad, Monghyr, Bhagalpur, and Puri, and the Board will doubtless give their special attention to the progress of recoveries in these districts.

8. Miscellaneous Revenue .- Out of the total collections under the head of Miscellaneous Revenue, nearly three-fourths, amounting to Rs. 7,58,776, were on account of the large recoveries of survey and settlement charges, principally in the districts of Muzaffarpur, Champaran, and Saran. The Board have satisfactorily explained the balance which remained at the close of the year.

9. Sale of Government lands .- During the year under report, 42 petty Government estates with an area of 441 acres were sold subject to a revenue

fixed in perpetuity of Rs. 1,190. The price realised was Rs. 3,987.

10. Particulars of estates held direct. - Particulars of estates held direct by Government, classified by Divisions, and showing the demands, cost of management, and total collections during the year are given below:-

		RNMENT ATES.		ATE ES-	То	TAL.	Cost of	Percent- age of cost on	Current collections.	Percent age of current collec-
Division.	Num- ber.	Current demand.	Num- ber.	Current demand.	Num- ber.	Current demand.	ment.	current demand.	contections.	demand
1	2	3	4		6	7	8	9	10	11
Burdwan	310 213 72 685 243 214 125 705	Rs. 66,286 3,55,917 5,74,419 4,14,339 7,30,877 2,36,179 2,94,071 4,76,752 2,39,615	7 42 33 101 29 17 5	Rs. 2,35,438 13,731 13,687 1,19,954 17,052 24,114 15,656 74,397	\$17 255 105 786 272 231 130 710	Rs. 3,01,724 3,69,648 5,88,106 5,34,293 7,47,929 2,60,293 3,09,727 5,51,149 2,39,615	Rs. 22,059 18,638 42,858 28,326 65,153 29,131 7,714 21,079 10,456	7'3 5'04 7'2 5'3 8'7 11'1 2'4 3'8 4'3	Rs. 2.74,494 3.17,930 4,03,927 4,80,895 5,07,188 1,94,360 2,67,982 5,23,951 1,96,001	90*90 86:00 68:52 90:00 67:74 74:66 86:52 95:06 81*79
. Total	2,578	33,88,455	239	5,14,029	2,817	39,02,484	2,45,414	6.3	31,65,828	81'7
Total in 1897-98	2,495	31,86,929	244	5,09,891	2,739	36,96,820	2,42,663	6.2	29,34,149	79.3

In seven districts, namely, Birbhum, Bogra, Pabna, Tippera, Noakhali, Gaya, and Shahabad, as against 11 in the previous year, the cost of management exceeded 10 per cent. on the current demand, the standard aimed at being 6 per cent.

11. Road and Public Works Cesses.—The following table shows the demands, collections, remissions, and balances on account of the road and public works cesses during the year under report, as compared with the figures for the two preceding years:—

YEAR.		AND AFTER	EXCLUDING EMISSIONS.	Collections (including advance	ercentage of collections on current de- mand.	Balances.	tage of ees on de-	ions.
	Current. Arrear. Total.		Total.	collec- tions).	Percentage collection current mand.	Duranous.	Percentage balances gross. c mand.	Remissions
1	2	3	4	5	6	7	8	9
	Rs.	Rs	Rs.	Rs.	- 49	Rs.	1 1	Rs.
1896-97	86,61,682	17,24,415	1,03,86,097	86,16,072	99.4	17,91,576	17:2	63,283
1897-98	89,56,309	17,82,378	1,07,38,687	88,71,693	99.0	18,75,440	17.4	81,813
1898-99	90,38,880	18,60,441	10,8,99,32.	90,06,445	99.6	19,07,444	17.5	56,005

The increase in the current demand is due mainly to the partial revaluations of the districts of Mymensingh, Backergunge, Tippera, Rangpur, Dinajpur, Rajshahi, and Manbhum, and by the increased assessment of coal mines in the district of Burdwan. Both the cesses were levied at the maximum rate of one anna in the rupee in the 43 districts in which Act IX (B.C.) of 1880 is in forces: 99.6 per cent. of the current demand was realised during the year under report as against 99 in the previous year. In 27 districts the current collections were below 90 per cent. on the current demand, and in 12 districts the proportion of arrear collections to the demand was below 80 per cent. The aggregate collections were higher in amount than in any preceding year, and the percentage of collections on the current demand was also higher than in 1897-98.

12. Remittance of land revenue and rent by means of money-orders.—There was an increase in the number of money-orders issued for the payment of revenue and cess from 193,011 to 198,746, and in the amount covered by them, from Rs. 18,06,485 to Rs. 18,29,360. The system continues to be popular among owners of petty estates, but the owners of large estates prefer to make payments through their agents. The largest numbers of orders as in last year were sent in the districts of Chittagong, Hooghly, Faridpur, and Dacca.

The following table gives the available statistics of the working of the system of payment of rent by money-orders during the last five years:—

	YEAR.		Number of money-orders issued for rent.	Amount.	Number of such orders refused.	Amount.
100 to 10	1		2	3	4	5
1894-95 1895-96 1896-97 1897-98 1898-99		# 	40,834 43,708 50,488* 51,865* 50,484	Rs. 5,87,371 6,20,097 7,40,526* 7,12,973* 7,67,913	13,772 14,503 14,070* 11,295* 10,137	Rs. 1,45,695 1,59,890 1,73,724* 1,52,116* 1,23,952

^{*} These are the corrected figures.

It is reported that usually the system is resorted to only when there is bad feeling between the landlord and his tenants, and the Lieutenant-Governor does not conceal bis regret that the system is spreading.

13.	Operation of the sale	laws.—The	working of	the sale	laws	during t	he
last five y	years is shown below	ri o- cided d	- autoi i	e et demo	(1258.54)	n elymen	

			Number of estates and		Sc	OLD.		Percentage	Revenue	Amount	Amount
Yı	AR.		sbares and interests liable to sale.	Estates.	Shares.	Interests.	Total.	column 6 on column 2.	demand of estates sold.	of defaults.	by sale.
16	ı		2	3	4		6	7	.8	9	10
894-95 895-96 896-97 897-98 898-99		::	15,275 16,237 20,272 20,977 21,433	950 966 1,114 1,109 1,070	516 539 492 536 720	2 1	1,466 1,507 1,607 1,645 1,790	9.6 9.2 7.9 7.8 8.3	Rs. 1,93,872 2,93,232 2,00,650 1,80,477 1,94,228	Rs. 72,624 2,38,931 85,003 73,466 75,741	Rs. 11.11,334 12,85,981 9,89,406 10,95,928 16,83,326

The number of estates sold (1,070) represents only about 06 per cent. of the total number of estates in Bengal (1,81,095). The prices realised by sale rose from 6.07 to 8.6 times the revenue demand on the properties sold. Out of 443 appeals preferred to the Commissioner against sales, 68 were successful. and recommendations for the annulment of the sales were made to Govern-

ment in 18 cases on the ground of hardship.

Defaults were most numerous in Shahabad (5,292), Saran (1,862),
Chittagong (1,705), Cuttack (1,692), Muzaffarpur (1,351), Darbhanga 1,069),
and Mymensingh (1,009). In Shahabad, as in the preceding two years, the sale law appears to have been worked with undue leniency, and though, as compared with 1897-98, there was a decrease in the number of defaults and an increase in the number of sales, yet 36.8 per cent. of the total number of estates and shares on the revenue-roll in this district defaulted, and the proportion of sales to defaults was still as low as 8 per cent. The land revenue collections of this district are as follows :-

Class	T			 	98·15	69.1
Olass		***	***		OF THE PROPERTY OF THE	CONTRACTOR OF THE PARTY
,,,	II(a)		***	 	95 45	92.01
"	II(e)				79.51	11.19
	III			 ***	80.55	47.31

Only in class II (a) (current) was the Board's standard reached; and, in the absence of explanations, this cannot but be considered very unsatisfactory. The Lieutenaut-Governor desires the Board to insist, in the absence of special circumstances, on the adoption of a stricter observance of the sale law in future in Shahabad, Saran, and Muzaffarpur.

There were excessive delays in holding sales for arrears of each kist in . Chittagong, Patna, and Puri. The Lieutenant-Governor is glad to find that the Board have in their Circular No. 2 of March 1899, issued orders with a view to improve the observance of the rules relating to the dates of holding sales.

In order to check frauds in the tauzi departments of Collectorates, the Government is now considering a proposal to entertain, under the supervision and control of the Accountant-General, Bengal, a small establishment, to be deputed by the Board, without previous notice, to audit the accounts of those districts in which heavy balances of land revenue are reported.

14. Working of the Public Demands Recovery Act 1 (B.C.) of 1895.—

The following statement shows the number of certificate cases instituted and disposed of during the year under the different classes of public demands:-

The state of the s	Number	Number		Disposed		PENDING-	
CLASSIFICATION OF DEMAND.	pending from last year.	filed during the year.	Total.	of during the year.	More than six months,	Less than six morths.	Total.
1	.2	3	4	5	6	7	8
I. Demands of all kinds under section 5 II. Arrears of rent due to Government, clause {g}, section 7 (1) III. Embankment dues, section 70, Act III (B.C.) of 1882 IV. Water-rates, Act III (B.C.) of 1876 V. Cesses, Act IX (B.U.) of 1880 VI. Demands of the Court of Wards, clause (h), section 7 (1) VII. All other demands under section 7 (1)	410 7,138 2,544 78 44,673 3,948 13,190	1,526 32,517 5,779 1,477 125,807 7,199 37,036	1,986 39,655 8,323 1,555 1,70,480 11,147 50,226	1,439 31,379 5,737 1,480 113,527 6,890 33,999	125 1,859 055 3 14,618 2,101 3,742	372 6,917 1,931 72 42,335 2,156 12,485	497 8,276 2,586 75 56,953 4 257 16,227
Total {1898-99 1897-38 1896-97	71,981 78,809 59,302	211,341 172,800 174,572	2,83,322 2,51,609 233,874	194,451 179,595 155,065	22,603 22,148 21,004	66,268 49,866 57,835	88,871 72,014 78,809

There was a net increase of 38,541 in the number of certificates filed. The increase is shared by all classes, except III and IV, and is most marked in class V, "Cesses," class VII, "All other demands," and class II, "Arrears of rent due to Government," being 24, 144, 7,415, and 6,855 respectively. The increase under class V, which is shared by all Divisions except Rajshahi and Bhagalpur, and the increase in class II, are said to be due largely to better supervision and partly to greater strictness in enforcing demands after the effects of the famine had passed away. The Board remark that the order sanctioning the entertainment by Collectors of extra establishment on a sliding scale for the Certificate Department, which was given effect to from the 1st April 1898, largely contributed to the increase in the number of certificates issued. increase under class VII is due to the issue of certificates for the recovery of fines under the Land Registration Act, of advances under the Land Improvement and Agriculturists' Loans Act, and of costs of partition and survey and settlement. The proportion of certificates disposed of to the total number for disposal decreased from 71.3 per cent. in the previous year to 68.6 per cent. The number of certificates filed for the realisation of water-rates shows a steady and satisfactory decline from year to year. The proportion of cases disposed of was highest in the Orissa Division and lowest in that of Burdwan. In the Resolutions of the two preceding years, the unsatisfactory state of the certificate work in the Burdwan Division was noticed, and unless a very marked change for the better takes place in all the certificate offices of this Division during the current year, the Board are desired to submit in July next a report showing what measures they would propose to ensure the long-needed improvement. During the year under review the disposals fell short of the institutions in all the districts of this Division, although the percentage of cases pending over six months decreased from 59.5 to 39.9, and the number of disposals increased in Birbhum, Bankura, and Hooghly. Compared with the total number of cases for disposal, the number pending over six months at the end of the year were in Hooghly 21 per cent., in Burdwan nearly 23 per cent., and in Bankura not quite 27 per cent., figures regarding which any comment would be superfluous. It is noted that the corresponding figures for Muzaffarpur are 13 per cent. and for Saran 15.6 per cent. which are not satisfactory.

15. Compulsory measures for realisation.—Of the cases in which the demand was realised, 29.8 per cent. were disposed of on issue of notice, 51.3 per cent. after attachment of property, and 3.2 per cent. after actual sale; the corresponding figures in the previous year were 29.2, 50.6, and 2.8 per cent. In Chittagong post-card notices were issued without much effect. The number of persons imprisoned for non-payment of public demands increased from 22 to 52, of whom 37 were released without payment of the debt.

In the Resolution on last year's report, the Board were asked to enquire and report on the working of section 21 of the Public Demands Recovery Act; and the opinions of the various District Officers and of the Board are now before Government. The conflict of views is pronounced, but the Lieutenant-Governor is disposed to agree with the Board that the section as it stands is a source of weakness, and should be amended. Before, however, taking action in that direction, His Honour will ask for the Board's opinion as to what measures are necessary for the purpose of improving the present state of road-cess collections. There is manifestly something seriously wrong when, in one year, in a district protected by natural advantages from the vicissitudes of the seasons, there are as many as 17,000 certificates in existence for the recovery of a cess, the incidence of which has been familiar now for many years; and His Honour emphatically refuses to acknowledge such a state of things as due to anything else than deliberate dilatoriness on the part of the persons from whom the tax is due. It is impossible to believe that so many landlords of that district are unable to pay the sums due; and one perfectly legitimate inference is that the methods which the law now puts at the disposal of District Officers for the realisation of the cess are, so far as ensuring promptness, insufficient, and require consideration as to the changes needed.

ADMINISTRATION OF LAND REVENUE.

16. Management of Government estates.—The grant at the disposal of the Board, calculated at the rate of $9\frac{1}{2}$ per cent. on the collections for the

management of Government estates during the year, and for miscellaneous and sanitary improvements in connection with them, amounted to Rs. 4,94,000: the expenditure incurred is shown below:-

	Allotment, 1898-99.	Expenditure, 1898-99.	Allotment, 1897-98.	Expenditure, 1897-98.
1	2	3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5
Grant of— (a) Management proper (b) Sanitary improvements (c) Miscellar eous and agricul tural improvements.	Rs. 4,94,000 {	Rs (a)2,45,414 (b)1,11,273 (c) . 75,238	Rs. } 4,71,579	Rs. (a)2,42,664 (b) 60,316 (c)1,38,089
Total	4,94,000	4,31,925	4,71,579	4,41,069

Out of a total allotment of Rs. 2,13,267 made by the Board under the last two heads, the amount expended was Rs. 1,86,511 only, leaving a saving of Rs. 26,756. The largest savings were in the Rajshahi Division (Rs. 9,583), the Patna Division (Rs. 5,154), the Chittagong Division (Rs. 3,530), and the Bhagalpur Division (Rs. 2,667).

In the two preceding years the Lieutenant-Governor had occasion to notice the failure to make a full use of the funds available for improvements on these properties, and in the Resolution of last year the Board were requested to submit a special report explaining the difficulties experienced in giving effect to the wishes of Government in this matter. In their present report the Board have furnished explanations in regard to each Division, and they recommend for general adoption the proposal of the Commissioner of Rajshahi that a programme should be made of the agricultural and sanitary improvements necessary in each district during a series of years. The Lieutenant-Governor accepts this very obvious and proper recommendation, and desires that a programme of works for each district may be prepared every five years under the directions of the Board. The programmes for the five years 1900-1901 to 1904-1905 should be drawn up and settled during the coming cold weather camping season. The Board also point out that the end of the official year comes just at the time when wells should be sunk and tanks dug or re-excavated, and they suggest that sums allotted should lapse after the 30th June, instead of after the 31st March, but considerations of accounts prevent, the Lieutenant-Governor is informed, the acceptance of this suggestion. The grant of 1 per cent. on collections made over to the Director of Public Instruction for educational purposes in connection with Government estates amounted to Rs. 57,980, but the amount actually spent was Rs. 62,023, the excess expenditure being paid by the District Boards and from other sources. The $1\frac{1}{2}$ per cent. grant on roads and communications amounted to Rs. 56,188. In the Resolution of last year, it was observed that although separate accounts in respect of this grant are not kept, there should be no difficulty in ascertaining what roads in connection with Government estates are maintained by the District Board and what sums were spent upon them during any particular year, and the Board were accordingly desired to furnish further details in future. In their present report the Board have furnished detailed information to the extent possible; but they do not think that the District Boards should be required to consider the exact situation of khas mahal estates in deciding what roads should be made or repaired, views, in which the Lieutenant-Governor concurs. The special allotment for agricultural and sanitary improvements, amounting to 3 per cent. on collections, yielded Rs. 1,17,473; the expenditure amounting to Rs. 1,26,628. The subject of introducing new staples and improved agricultural machinery will be dealt with in the Resolution on the report of the Director of Land Records and Agriculture, Bengal.

17. Inspection of accounts, - The usual inspections were made of the registers and accounts of the Government estates, but no material irregularities were brought to light. The revised rules of management issued by the Board

18. Condition of the raiyats. - The condition of the raiyats on the Government Estates improved with the generally good crops of the seasons subsequent to the famine. Local causes injuriously affected them in Midnapore; and the

effects of the cyclone have not entirely disappeared from Chittagong.

19. Survey and settlements.—The survey and settlement work in the Province generally has as usual been separately reviewed in detail for the year ending 30th September 1898 in Government Resolution No. 1315, dated 28th March 1899.

In Government and temporarily-settled estates 118 original settlements, 4,162 resettlements, and 220 summary settlements were completed during the year, with a net increase of revenue, amounting to Rs. 4,77,676, due chiefly to the Orissa settlements.

In the usual forecast of increases of revenue expected from revision of settlements and other causes for the six years ending 1902-1903, a total increase of Rs. 6,55,644 was anticipated in the demand of the year under The causes of this difference are explained by the Board, the principal reasons being-

(a) in place of Rs. 4,42,500, the estimated increase in the revenue of the temporarily-settled estates in Orissa, a minimum increase in the revenue of about Rs. 3,50,000 was obtained; and

(b) in Chittagong the revision of the rent-rolls yielded an increase of

Rs. 17,519 less than the forecast;

(c) failure to complete the year's programme.

20. Land Registration .- The following statement shows the total number of interests registered under initial registration in each division from the commencement of the operations, the number of interests registered under section 42 up to the end of the previous year since the completion of land registration proceedings, and the percentage of the number of interests registered during the year on the total number of interests registered up to the end of the previous year:-

	Division.		interests regison 42 up to the uce completion on proceedings.		NUMBER O SECTION	NUMBER OF APPLICATIONS UNDER SECTION 42 FILED DURING THE YEAR.				
Division.	Total nun ber of interests registered under initial registration (secti. n. 38). This number should be the same in each return. Total number of interests registered under section 42 up to the end of that year succe completion of land registration proceedings.		of land registration p	(a) On account of succession by inheritance, whether under wid or otherwise.	(b) On account of suc- cession by purchase, gift, or otherwise.	(c) Total.	Number of interests registered	Percentage of column		
1		2	3		5	6	7	8	9	
Burdwan		50,056	42,930	92,986	2,559	1,959	4,518	3,493	3.7	
Presidency		66,084	58,561	1,24,645	1,750	1,288	3,038	2,305	1.8	
Rajshahi		27,045	36,173	63,218	1,511	806	2,317	2,219	3.6	
Daces		99,851	1,26,094	2,25,745	4,639	5,084	9,723	9,054	4.0	
Chittagong		1,84,649	2,09,145	3,93,794	3,127	6,674	9,801	8,825	25	
Patna		2,87,642	2,98,185	5,85,827	11,145	12,254	23,399	20,959	37	
Bhagalpur		1,00,948	60,849	1,61,797	2,011	1,669	3,680	4,396	2.7	
Oriesa		1,69,092	63,560	2,32,652	3,630	4,818	8,448	6,496	2.7	
Chota Nagpur		3,872	1,988	5,860	90	216	306	229	3.9	
Total		9,89,039	8,97,485	18,86,524	30,462	34,768	65,230	57,976	3.0	

There was a decrease of 1,327 in the number of applications for mutations filed; and in the number of cases disposed of a decrease of 3,618. This reluctance of new proprietors to register their names, is not a gratifying feature in the report. The re-writing of Register D of intermediate mutations has now been completed in 33 districts.

21. Partitions. - On the passing of Act V (B. C.) of 1897, which came nto force on 8th December 1897, revised rules and instructions were issued for he guidance of officers employed on the partition of estates, in supersession

of those issued under the old Act VIII (B. C.) of 1876. Partition work is of very great importance in the three Divisions of Patna, Bhagalpur and Dacca, and the statistics of the cases instituted and disposed of there are given below:—

Division.	Pending a	ending at close of—		Instituted during—		Total for disposal during the year—		Disposed of during-	
	1896-97.	1897-98.	1897-95.	7-95. 1898-99. 1897-98. 1	1898-99.	1897-98.	1898-99.	1898-99.	
1 .	2	3	4	5	6	7	8	9	10
Patna Bhagalpur Dacca	999 124 476	917 126 426	267 56 137	175 32 31	1,266 180 613	1,092 158 457	349 54 187	959 35 116	833 123 341

The number of cases instituted decreased in the Patna Division by 92, in Bhagalpur Division by 24, and in the Dacea Division by 106. The disposals showed also a falling off in each of the three Divisions. The large decrease in the Patna Division is stated to be mainly due to settlement proceedings, for when a district is undergoing survey and settlement new batwara cases are not taken up till the record-of-rights is completed. In Monghyr the decrease in disposals is attributed to the fact that in preceding years delivery of possession of separate estates under section 123 of Act VIII (B.C.) of 1876 used to be made on the expiry of 60 days after confirmation of the partition by the Commissioner; while during the year under report, delivery of possession has, in accordance with the Board's Circular Order No. 5 of February 1898, been refused until after recovery in full of partition-fees and stamp duty. No less than 157 applications were struck off under section 11 of the Act. The audit of the Monghyr Batwara accounts was completed during the year, and from the scrutiny of this and several other district Batwara accounts, the Board have concluded that general professional audit is not necessary.

The average cost per acre of partitions completed during the year varied from Rs. $2 \cdot 1 \cdot 10\frac{3}{4}$ in Malda to Re. $0 \cdot 2 \cdot 2$ in Bhagalpur; and explanations of the variations noticed in the different districts have been furnished. The lowness of the charge in Bhagalpur was due to the partition work being mostly based on settlement papers. The cost of a partition, and the time occupied in completing it, are very much in the hands of the parties; still, in the absence of any special reason, the Lieutenant-Governor cannot but regard the protraction of proceedings over twelve and fifteen years, as in Monghyr and Shahabad, as a sign of weak administration. It is presumed that the Board inform themselves in regard to cases of this sort, and issue orders to ensure their acceleration.

22. Land Acquisition.—During the year the Board confirmed the proceedings connected with the acquisition of 3,080 acres at a cost of nearly six lakhs. The details appear from the list below:—

Purpose for which land was taken up.		Area of land taken.	Revenue abated.	Cash compensation paid, including other charges.	
	1		2	3	4
Government Irrigation Municipalities Railways District Boards	 Total		Acres. 516 1,211 80 986 287	Rs. 170 257 84 270 111	Rs. 64,725 79,104 1,79,601 2,00,711 74,038

The average cost per acre amounted to Rs. 194, or omitting costly projects, to Rs. 125. The corresponding figures of the previous year were Rs. 164 and Rs. 129. The most important railway projects in progress at the end of the year are the Sultanpur-Bogra-Kaliganj and the Rajbari-Faridpur extensions of the Eastern Bengal State Railway; extensions of the Bengal-Duars Railway in Jalpaiguri and Rangpur, and the Santarabari extension of the Cooch Behar State Railway; the Mymensingh-Jagannathganj Railway; the Jharia Branch, the Howrah-Santragachhi Section and the Shalimar Branch of the Bengal-Nagpur Railway; the South Bihar and Mogulsarai-Gaya Railways; the Segouli-Raxaul, the Bettiah-Bagaha, the Hajipur-Katibar, and Sakri-Jainagar extensions of the Tirhut State Railway; and the quadrupling of the Eastern Bengal State Railway line from Ballygunge to Naihati. Important projects for the improvement of the town of Calcutta were in progress, 340 acres being taken up, for which Rs. 6,33,189 was paid as compensation for the land and buildings thereon, or Rs. 1,862 per acre. These proceedings were not, however, confirmed in the year under report.

23. Kunungos and Patwaris.—The reorganization of the patwaris in Orissa, and in the Pataspur temporarily-settled estates in Midnapore for the purpose of maintaining records of the present settlement is still under consideration.

24. Advances under the Land Improvement Loans Act.—Out of a total amount of Rs. 1,88,800 applied for by the Collectors for advances under the Land Improvement Loans Act, XIX of 1883, the sum of Rs. 1,16,722 was allotted for distribution, of which Rs. 35,268 was actually disbursed, as against Rs. 3,58,510 in the preceding year. The marked decrease is due to the large advances made during the famine, and to the favourable crops of the year.

The progress made in the realization of outstanding advances is shown

Outstanding advances.	Demand (principal plus interest) during the year.	Collections (principal plus interest) during the year.	Percentage of collections on demand.	Remissions.	Balance at the close of the year.
1	3	3	to the factor of the second of	,5	6
Rs. 7,60,662	Rs. 2,20,626	Rs. 1,77,132	80.2	Rs. 14,418	Rs. 42,489

Of the sums advanced in the districts of Saran, Champaran, Muzaffarpur and Darbhanga in 1896-97 and 1897-98 under the modified rules for famine conditions, amounts agregating Rs. 33,431 became realizable during the year under report, but only Rs. 11,429 were collected. This result is scarcely satisfactory, as presumably according to the rules each recipient is solvent and has given to the Government ample security for repayment.

25. Advances under the Agriculturists' Loans Act.—A total sum of Rs. 26,403

was advanced under the Agriculturists' Loans Act.

The demands, collections and balances on account of advances under this Act during the year are shown below:—

Outstanding advances.	Demand (principal plus interest) falling due during the year.	Collections (principal plus interest, during the year.	Percentage of collections on demand.	Remissions.	Balance at the close of the year
1	2	3	4	5	6
Rs. 12,10,337	Rs. 7,66,605	Rs. 5,46,932	71:3	Rs. 2,458	Rs. 2,17,024

Of the balances outstanding at the close of the year, the Patna and Chota Nagpur Divisions are responsible for Rs. 1,18,351 (or 54.5 per cent.) and Rs. 65,828, respectively. It is desired that the recovery of these advances should be carefully enforced, due regard being had to the outturn of the season's crops. Their non-recovery not only involves actual loss to Govern-

ment, but also fosters the belief in the recipients that it is not the intention to recover such advances, a belief that would, in future emergencies, tend to

modify the liberality of Government.

26. Relations between land ord and tenant.—The Board, for reasons which they state, are of the opinion that in Bengal the relation of landlord and tenant is in a state of transition from the patriarchal type to that of strict legal contract. This state of transition is, in their belief, not satisfactory to either party. This is true of all transitions, and the end, which the Legislature had plainly in their view, must be patiently awaited. The progress towards it may be slow, but it was not to be desired that it should be rapid. Unless the new adjustment is gradual in its effect, the relations, which the Board describe as fairly satisfactory, would necessarily be strained. The Government could desire no better verdict than that which the Board have given. Evasions and revolts there must be, as the change works on, and indeed will be, when the consummation is reached. It is for the District Officers to keep their eyes open, and steadily check these aberrations as they occur. And it is a pleasure to the Lieutenant-Governor to understand from the Board's minute review that in this great and diversified province the submission to the rent law is so

general, and the deviations partial and lessening.

Among the cases mentioned by far the worst, in one sense, is that of certain shopkeeper-tenants in Nadia, who have purchased land as a speculation and have been extorting excessive rents by a system of annual leases. The Lieutenant-Governor presumes this to refer only to the tenants, at-will on these properties, but he would be glad to have further details and to learn what the Collector is doing to stop this. In the Kishanganj portion of the district of Purnea, it is reported that many so-called dacoities are in reality concocted cases arising out of the coercion of recalcitrant raivats, and the tenants are said to be recalcitrant, because there are unsettled disputes among co parcenary landlords. If this be the case, the obvious remedy is a definition of their rights, and the Lieutenant-Governor understands that the Collector's proposals to that end are now before the Board. He is glad of the opportunity of commending this measure to Collectors as an extremely efficacious pacificator in cases of agrarian dispute. In a case which he has just seen in the Police Department, a property in the Rajshahi district, which had been the scene of serious riots, is reported to be now at peace. And it is from this regard that it has been arranged to survey and make a record of rights for the whole district of Backergunge.

27. The Bengal Tenancy Act.—The Bengal Tenancy Act is generally reported to have worked smoothly. The Bengal Tenancy Amendment Act, III (B.C.) of 1898, under which a new procedure has been prescribed for settlements, came into force on the 2nd November 1898, and Chapter VI of the Government Rules under it has been revised and republished. In January 1899, the Act was introduced into the Jalpaiguri district almost entirely in the permanently-settled parts and, with certain reservations, in the Western Duars.

The working of some of the most important sections of the Bengal Tenancy Act in the various Divisions of the province is shown below :-

1		2		3	4	8	6	7	8	9	10	11	13
	TRANS	SFER OF TH	NURES.									1	
Divisions,	(a) Voluntary, section 12(3).	(b) By decree sale, sec- tions 13(2) and 14.	(c) By succession, section 15.	Commutation of rent payable in kind, section 40.	Appraisement or division of pro- duce where rent is paid in kind, sections 69 and 70.	Registra- tion of improve- ments, section 89.	Certificates of Collectors as to acquisition of land for building or other purposes, section 84.	Notices of re- sumption of land by land- lords, section 87(2).	Written permission to land- lords to measure land under section 90,	Applica- tions by Collectors for ap- point- ment of common Manager under section 93,	Applications made for survey and record of rights under Chapter A.	Applica- tions made for survey and record of pro- prietors' private lands under Chapter XI.	Local enquiries held by order of a Court, section 158.
Burdwan Presidency kajshahi Jaces hittagong shagalpur rissa	1	104 205 48 1,058 944 2 5	249 481 42 470 410 1 7	328 1 224	7 4 3 3 554 492	10 3 19 20 187 95	1 10 1	21 9 4 16 13 577 9			3 10 1 28 2		7 5 1 41 31
GRAND TOTAL FOR 1898-99, GRAND TOTAL FOR 1897-98.	13,859	2,366 2,526	1,660	553 8u0	1,960	334	12 7	649 918		2	45		85 87
Difference	-1,636	-160	+115	-247	-156	-2	+5	-269		-2	-1		+48

The above table clearly emphasises the fact that many of the provisions of the Act are very slightly utilised. For various reasons, which time alone will dispel, landiords still show reluctance to take the fees paid under sections 12 to 17 of the Act.

28. Rent suits.—The number of suits tried in Revenue Courts under the provisions of Acts X of 1859 and I (B.C.) of 1879 during the years 1897-98

and 1898-99 are compared below:-

District.				OF CASES	Increase.	Decrease.	
			1897-98.	1898-99.			
-14	1	101-10-10-10-10-10-10-10-10-10-10-10-10-	2	3	4	5	
Darjeeling Jalpaiguri Cuttack Puri Balasore Hazaribagh Ranchi Singhbhum Manbhum Palamau			53 5,290 4,757 2,679 3,287 2,697 5,184 597 5,711 297	205 4,825 5,350 3,049 2,583 2,489 6,325 632 6,839 309	152 593 370 1,141 35 1,128 12	 465 704 208	
24. 	Total		30,552	32,606	3,431	1,377	

From the 1st January 1899-the date from which the Bengal Tenancy Act was extended to the Jalgaiguri district-all rent suits and fresh applications for execution in that district were instituted in the Civil Courts, and the number of cases shown in the above statement against this district for 1898-99 were for only nine months prior to the introduction of the Act. In Balasore, the decrease was chiefly in rent suits and execution cases owing to the settlement of disputes of rent in the present settlement. In Ranchi a large number of suits for recovery of rents were instituted by the Maharaja of Chota Nagpur, who, like other landlords, had refrained from adopting stringent measures in the previous years owing to the scarcity; and there were also increased institutions of claims for rent in lieu of predial services under the Chota Nagpur Commutation Act, IV (B.C.) of 1897. The increase in Manbhum is due to a smaller number of institutions during the preceding year on account of scarcity.

29. Miscellaneous.—During the year 809,865 cases of all kinds were instituted and 130,092 cases were pending from the previous year. The cases disposed of numbered 791,526. The corresponding figures for the previous

year were 765,704 and 792,691.

30. Training of Junior Civilians in survey-settlement work .- Two training camps were opened in North Bihar-one in Saran on 12th December 1898, and the other in Darbhanga, about a month later, the course in each lasting for about two months. At these two camps eleven officers were instructed in the elementary principles of survey and settlement work, including traverse and cadastral survey, khanapuri, attestation, and the disposal of boundary and internal disputes under the direct supervision of the effect of the e internal disputes, under the direct supervision of the officers of the Survey and Settlement Departments. Advantage was also taken of settlements going on in Bankura, Backergunge, Bhagalpur and Cuttack to give some rudimentary training to five more officers.

General .- The thanks of the Lieutenant-Governor are due to the Board for their careful and efficient administration of the Land Revenue Department, and for their excellent report. The paragraphs relating to the several District and subordinate officers mentioned as deserving of special commendation

will be communicated to the Appointment Department.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK.

RESOLUTION ON THE ADMINISTRATION REPORT OF THE COMMIS-SIONERS OF CALCUTTA FOR THE YEAR 1898-99.

MUNICIPAL DEPARTMENT.-MUNICIPAL.

Darjeeling, the 18th November 1899.

RESOLUTION-No. 780T.-M.

READ-

The Administration Report of the Commissioners of Calcutta for the year 1898-99. Read again-

The Report for the year 1897-98, and the Resolution recorded by Government

THE office of Chairman of the Corporation was held by Mr. R. T. Greer up to 23rd November 1898, when he was relieved by the permanent incumbent, Mr. W. R. Bright. Babu Nilambar Mukerji continued to hold the office of Vice-Chairman throughout the year, and the Commissioners have since the close of the year recorded in a unanimous Resolution their appreciation of the value of his services. There were only four changes in the personnel of the

Corporation, all among the nominated Commissioners.

2. In the opening Chapter of the Report the Commissioners have given an interesting account of the chief works carried out and the principal reforms effected during the ten years that have passed since Act II (B.C.) of 1888 came into force. Referring to the programme prepared by Sir Henry Harrison of the wants of the newly added suburban area, they show that filtered water has been extended throughout at a cost of 18 lakhs of rupees; that a comprehensive scheme of underground drainage has been prepared and sanctioned, to cost 26 lakhs, and is now in course of execution; that a dh bikhana and an incinerator have been constructed; that something has been done to fill up insanitary tanks, to reform the condition of the Muhammadan burial grounds, and to improve the arrangements for conservancy; that the unfiltered water-supply has been extended at a cost of 8 lakhs of rupees; and that five fine new roads have been opened out. The effect of these improvements is reflected in the decreased death-rate in the suburban area, which is now 35.8 per mille, as compared with 42.7, the average of five years before the amalgamation. Taking the town and suburbs together, 167 lakhs of rupees have been spent from capital and revenue on works of improvement, the principal items of which are the construction of the Harrison Road, the extension of the water-supply, both filtered and unfiltered, the development of the underground drainage system, the construction of 27 miles of new minor roads, the reclamation of bustees, and the more effective disposal of town refuse.

The record is a good one, and the Lieutenant-Governor desires to accord all due credit to the Commissioners under whose management it has been achieved. At the same time it would be an easy, if ungracious, task to point out that there is another side to the shield. It has often been remarked that the Commissioners are seen at their best in dealing with large projects. Had they devoted to the everyday work of the town,—to the collection of their revenues, to the conduct of their conservancy, and to the enforcement of their building regulations,—the same energy and interest that they have brought to bear on more showy but not more important matters, their administration would have claimed a different verdict from the voice of public opinion.

3. Meetings and attendance of Commissioners.—There were 30 general meetings of the Commissioners, 135 meetings of Standing Committees, 55 of Special Committees, and 32 of Sub-Committees. Seventeen Commissioners—12 elected and 5 nominated—attended more than 50 meetings during the year. The percentage of attendance among the elected Commissioners, the Commissioners nominated by Government, and the commercial representatives was 52,

42, and 41, respectively.

4. Proceedings of Commissioners.—The most important subjects which engaged the attention of the General Meetings were the Calcutta tramway question, the necessity of opening out the congested districts of Calcutta, and the discussion of the provisions of the Calcutta Municipal Bill. As regards the negotiations with the Calcutta Tramways Company, which have been under consideration since January 1897, it is understood that since the close of the year a satisfactory settlement has been arrived at. Arrangements have been made for the introduction of electric traction, and it may be hoped that with its employment the service will be greatly improved. For years past it has been a standing reproach to the town.

The necessity of opening out the congested areas of Calcutta, vital as it is to the health and sanitary administration of the town, presents a problem beyond the unaided resources of the Corporation. They have submitted to Government a representation on the subject, and the method of dealing with the question is at present under consideration with the Government of India.

The provisions of the Calcutta Municipal Bill, on which Government had desired a report by 1st July 1898, were discussed by a Special Committee in 44 meetings, and the final instalment of their Report was forwarded to Govern-

ment on 13th April 1899.

5. Finance.—The total actual income for the year, excluding transfer adjustments from capital funds, was Rs. 48,25,660. This is an increase of Rs. 75,000 on last year's income, but falls short of the estimated receipts by no less than Rs. 3,39,000. The deficiency is remarkable, and the reasons for it are not examined in the Report in such detail as the importance of the subject deserves. It is ascribed to a too optimistic system of framing estimates, which has since been discontinued, and to the generally adverse influence of the plague epidemic. The subject falls principally under the head of collections. The largest deficiency is of Rs. 1,27,000 in the general rate.

The total expenditure for the year was Rs. 48,01,042. The Corporation has thus kept within its income for the year, though the margin is but a

small one.

The actual expenditure was Rs. 63,000 above that of last year, but Rs. 2,13,000 below the budget grant for the current year. The largest decreases from the budget grants are under Road Department expenditure (Rs. 68,000), hospitals and vaccination (Rs. 33,000), and road cleaning (Rs. 32,000)—all objects upon which it is unfortunate that it should not have been found possible to spend the full amount sanctioned. On the other hand, Rs. 48,000 in excess of the budget estimate was expended on sewer cleaning and relaying.

After taking into account the transfer adjustments between revenue and capital funds, the four revenue funds together show an income of Rs. 53,73,760, and an expenditure of Rs. 51,11,466, the closing balance having risen to Rs. 5,78,962. Of these adjustments, Rs. 2,08,204 represents the amount advanced for plague expenditure and subsequently recouped, and Rs. 12,000 the contribution from capital funds to the pay of the supervising establishment. The remaining items are paper transactions between the various revenue funds.

The various statements of account given in the Report are somewhat confusing, and render it difficult to readily understand the financial position of the Corporation. In future a simple balance sheet should be given showing clearly the opening balance, the receipts, expenditure, and closing balance of the year. This should be divided into two parts—one dealing with Revenue and the other with Capital.

6. Loans.—The year opened with a total loan liability of Rs 2,67,72,379, of which Rs. 40,46,479 represents the balance of consolidated loans from Government. Of the latter, Rs. 2,95,444 were repaid in the year under

review.

Two new loans were floated during the year: one of 30 lakhs for 19 years, required for drainage and other projects, and a special one of 4 lakhs for plague expenditure. An additional deposit of 1 lakh on account of the 4 per cent. loan of 1897-98 was made during the year. At the close of the year the total loan liability was Rs. 2,99,76,934. Against this there were in the hands of the Corporation reserve fund accumulations amounting to Rs. 24,51,520.

The present charges on account of interest and payments to the sinking fund amount to Rs. 17,86,449, the limit imposed by law being Rs. 21,38,061, i.e.,

10 per cent, on the total annual valuation of the town.

7. Assessment and Collection of Revenue.—The revaluation of houses, lands, and bustees resulted in an increase in 4,798 cases, amounting to Rs. 8,07,078, and a decrease in 1,678 cases, amounting to Rs. 2,80,935. The net increase per annum was therefore Rs 5,26,143, representing an increase in the consolidated rate of roughly 1 lakh. The assessed valuation of the town on 31st March 1899 was Rs. 2,13,80,610.

The following statement shows the result of the working of the collection

departments during the year under review :-

NAME OF DEPARTMENT.	Opening balance.	Current demand.	Total.	Collections.	Remissions.	Closing balance.	Percentage of total collections on current demand.	Percentage of total collections on gress demand.
1	9	3	4	5	6	7	8	9
Collector's	Rs. 1,81,352	Rs. 32,65,216	Rs. 34,46,568	Rs. 28,09,438	Rs. 1,01,895	Rs. (b)1,92,499	86.41	81.21
Joint-Collector's Warrant Depart- ment.	22,200 6,53,224	7,73,059	7,95,259 (a)11,17,262	6,44,029 3,31,073	25,548 90,399	(c)4,384 6,95,791	83°31 71°34	80°98 29°63
Total	8.56,776	40,38,275	48,95,051	37,84,540	2,17,842	8,92,674	93.71	77:31

 ⁽a) Includes Rs. 3,42,740 transferred by the Collector and Rs. 1,21,298 transferred by the Joint-Collector to the Warrant Department during the year.
 (b) Excludes Rs. 3,42,740 transferred to the Warrant Department during the year.
 (c) Excludes Rs. 1,21,298 ditto

In order to show clearly both the total results and the separate working of each department, it is necessary to present the figures in this rather complicated form, taking into account the transfer from other departments to the Warrant Department of portions of the current demand. It is a defect in the accounts presented in the Report that they do not show in a simple form the actual progress of the collections. For administrative purposes it is doubtless necessary to keep the Warrant Department separate from that of the Collector. But both are really a part of the machinery for collection of taxes, which for financial purposes must be treated as a whole. The Lieutenant-Governor desires that in future reports a statement similar to the above may be given; and also that a statement may be given showing in a similar form the combined

figures of the Collector's and Warrant Departments for 10 years.

The proper collection of its revenue has always been one of the principal difficulties of the Corporation, and is one of those which it has least efficiently dealt with. Hopes and anticipations of amendment have been frequently expressed, but have so far never attained to realization; and the outstanding balance of arrears has steadily continued to mount up until it has reached its present enormous proportions. To this rule the year under review has proved no exception. The gross collections are considerably short of the current demand, and the outstanding balance shows consequently an appreciable increase. It is true that the circumstances of the year furnish some excuse for this, and that had the work of collections not been considerably impeded by the exodus that followed on the outbreak of plague, it might now have been possible to record an improvement on the previous state of things. But there can be no doubt that the accumulation of so large a balance as that at present outstanding has been due to no temporary and fortuitous causes, but to the inefficiency of the collecting departments and to the mistaken leniency of the Commissioners themselves. An instance of their reluctance to allow prompt measures to be taken for the realization of their revenue is furnished by their continuous refusal to allow the service of notices of demand by the Collector in any but the final quarter of the year. The necessity of doing so was, for the third time, brought to the notice of the Commissions of the Co missioners by Government in last year's Resolution; but it was not until after the close of the year under review that it has been found possible to persuade them to adopt the suggestion as a tentative measure. Had it been adopted earlier,

it may safely be conjectured that the arrear balance would not now stand at its present figure. It is once more necessary to point out that undue leniency in the matter of collecting taxes is a mistaken kindness to the rate-payer. It is not alleged that the rates are so crushing as to encroach on the margin of subsistence even of the poorest classes; and in cases where they may be found to be excessive, ample remedies are provided temporarily by the very liberal remissions at present allowed, and permanently by the periodical reassessments. It is obvious, on the other hand, that the accumulation of such large arrears as are at present outstanding is likely to afford the subordinate collecting staff such facilities for fraud and extortion as must ultimately prove a far heavier burden on the poorer rate-payers than a prompt insistence on the realisation of the just demands of the Municipality. The Lieutenant-Governor looks forward to an improvement in this respect under the arrangements which have at last been made. The working of the now reorganized Warrant Department affords grounds, when compared with the results of previous years, for a certain amount of satisfaction. Its collections are largely in excess of those of the previous or any other year, and the closing outstanding balance is not greatly larger than the opening balance. In other words, the department has, with the aid of very large remissions, almost succeeded in keeping pace with the current year's work.

8. License Department.—The following statement compares the gross receipts under the several heads in this department for the last two years :-

			-		-				
1	2			3				4	
Heads of Receipts.	Amount realised, 1898-99.				Amount realised, 1897-98.			Budget estimate.	
Company of the contract of the pass of the contract of	Rs.	Α.	Р.	Rs.	Δ.	Р.		Rs.	
I Tax on trades and professions	3,24,585			3,34,204	7	1		3,45,000	
II.—Tax on carriages and animals	1,43,669			1,40,287	3	10		1,45,000	
III.—Cart registration fees IV.—Fees for removal of trade	75,786			80,643		0		78,000	
refuse V.—Fees for licenses under section 335 (stables, cows and	54,255	0	0	58,867	0	0		65,000	
bullock-sheds, &c.) VI.—Hackney-carriage, &c., regis-	330	0	0	218	0	0		100	
tration fees	16,751	4	0	16,549	9	4		19,500	
VII.—Miscellaneous receipts	622			1,037					
VIII.—Fines under section 90	10,911		9	10,388			1	10 000	
IX.— Ditto 80	2,428			1,304			3	16,333	
Total	6,29,339	15	2	6,43,500	13	2		6,68,933	

* This is 3rds of the total estimate of fines under the Act.

For the second year in succession these figures show a decided diminution, while the receipts from the tax on trades and professions have been steadily declining for four years running. The explanation given amounts to a confession of weakness on the part of the collecting agency. It appears that the ground lost during the exodus at the opening of the year had by the last fortnight been completely made up, but that the rise in the number of plague cases at the very end of the year made people "unwilling to part with their ready money for the payment of taxes." Such unwillingness, however, is peculiar neither to Calcutta nor to a period of plague; and the truth appears to be that the department is too ready to regard a difficulty not as a thing to be faced, but as an excuse to be put forward for deficient results.

The attention of Government was drawn by the figures given in last year's report to the extraordinary number of police court prosecutions instituted by this department, and to the nature of the results obtained in them.

It was remarked that these results pointed to inexcusable dilatoriness and laxity in the management of the department, and the Lieutenant-Governor

expressed his opinion that the police courts were not an appropriate agency for the collection of municipal dues. The same facts are, however, still more prominent in the present year. The number of prosecutions disposed of under section 90, which in 1896-97 was 8,761 and in 1897-98 14,139, has risen in the year under review to 17,991. Of these, no less than 10,037 were struck off or withdrawn without payment of fees; 6,619 were withdrawn on payment of the fees; and only 1,187 resulted in the infliction of a fine. The total number of persons prosecuted was 12,686 out of 25,029 assessees, or more than 50 per cent. of the whole. Nothing could be less satisfactory than these results or the explanation given of them.

It appears to have been the regular practice of the License Department to institute prosecutions at random and in immense numbers without first ascertaining even the whereabouts of the defaulters. Consequently processes

are not served, and a large number of cases are struck off.

The Lieutenant-Governor is prepared to make full allowance for the undoubted difficulty occasioned by the plague scare in the first quarter of the year, and he recognizes that some attempt has been made to avoid concentrating all the cases into a single month, the number filed in June 1899 being 10,906, against 14,416 in June 1898 and 10,148 in June 1897. But it is beyond doubt that the License Department has fallen into the habit of expecting the Police Courts to do its work for it, and this grave evil must be finally stopped. Under the provisions of the new law lately passed by the Bengal Council the ordinary procedure for the recovery of these dues will be by notice of demand, followed when necesssary by distraint and sale, as in the case of the consolidated The assessee may still elect to be prosecuted, if he prefers; but as in that case he is required to first deposit the amount due from him, it is unlikely that more than a very few prosecutions will result from the exercise of this option. The Chairman retains the power to prosecute if he thinks fit; but it is intended that this power shall be most sparingly exercised, if at all. The License Department will thus be relieved of the work of conducting prosecutions in court and of attending the service of summonses; and will be free to attend to its proper work of making assessments, serving notices of demand, and collecting its dues. The duty of directing distraints will devolve upon the Warrant Department; and the attention of the Chairman is invited to the necessity of making early arrangements to enable it to cope with these new duties promptly and effectively.

Market, Lighting, and Printing.—The collections of the Municipal Market for the year were Rs. 1,28,540 against Rs. 1,32,117 in the previous year.

At the end of April 1898, a large number of dead rats were discovered in the market, which on examination were found to be plague-stricken. A general exodus of vendors took place at once, and though some returned in the following month, there was a second exodus in June, which prevented the market being fully tenanted until the end of July. Under these circumstances, the falling off in revenue is small. There was a great decrease of expenditure under Repairs, on which large sums were spent after the earthquake in 1897-98, and also in cartage; and consequently the net profit derived by the Corporation, including the charges on account of loans, was Rs. 43,565 against Rs. 16,281 in the previous year.

The usual amount of progress was made in improving the lighting of the town, the expenditure under this head being Rs. 4,20,783 against Rs. 4,15,448 in the preceding year. In the Printing Department there was a largely-increased outturn in connection with plague work, the financial result being a nominal profit of Rs. 9,048 against an average of Rs. 3,025 during the three preceding years. This is, however, merely a paper transaction, and does not represent actual gain, but only the saving effected by doing the work depart-

mentally instead of through outside presses.

Litigation.—Eighty-nine fresh civil suits were instituted for recovery of dues during the year against 36 in the preceding year. Decrees were obtained in 71 of these, 4 were compromised and withdrawn, and 14 were pending at the close of the year. The Warrant Department continues to be unsuccessful in executing decrees. This was commented on by Government and the composite appearance are leading in the given that great ast year, and the somewhat superfluous explanation is now given that great

difficulty was experienced in the work. It is hoped that the energetic steps which are now reported as being taken will be productive of result.

Four civil suits were instituted against the Corporation during the year. In two of these the Corporation was successful, and two were left undecided.

Enquiries were made as to the possibility of recovering a sum of Rs. 11,811 of which the Corporation had been defrauded by the action of an employee at the Municipal Workshop at Entally. The amount, however, was ascertained to be irrecoverable.

The total number of criminal prosecutions instituted by the Corporation was 37,544 against 30,798 in the previous year. Of the various departments concerned with these prosecutions, the work of the License Department has already been commented on. Of the remainder, the Conservancy Department instituted 9,044 cases against 6,461 last year, while the Food Inspection Department instituted only 145 against 293. The latter fact is, as the Chairman remarks, one to be regretted, and the residents of Calcutta not unnaturally continue to complain of the immunity with which unwholesome

and adulterated food is sold.

In spite of the fact that 37,544 cases were instituted, the amount of fines realized was only Rs. 35,202, whereas in 1896-97 Rs. 43,132 were realized in 25,778 cases. The reason of this is partially explained by the remarks already made on the working of the License Department. It is further stated in the report that the fines imposed by the Honorary Magistrates were inadequate and ineffective as to their deterrent effect. This seems to have been conspicuously the case in prosecutions under sections 240 to 242, for building houses without submitting plans; the average fine imposed in these cases being Rs. 3-13-9. The Chairman adds that this remark has been made year after year in the Annual Reports, and that it is a matter of concern as well as of regret that it has to be repeated again this year. The Commissioners have consistently declined to apply to Government for the appointment of a special Magistrate under section 422 of the Act for the trial of municipal cases. Under the new law, this power vests in the Government, and it will be considered whether

an early opportunity should not be taken to exercise it.

11. Town and Bustee improvements.—The total expenditure under this head was Rs. 99,626 against Rs. 57,340 in the previous year. Of this sum, Rs. 77,681 was absorbed by town improvements, and Rs. 13,058 was spent on the acquisition of land for bustee roads. No mention is made of the work done in constructing bathing-platforms and filling up insanitary tanks during the past year. The latter question has been noted by the Chairman in his general review of the work of the last 10 years as one which the Corporation have

found it impossible to deal with adequately in the suburban area.

12. Engineer's Department.—In the matter of water-supply there is nothing to record but the ordinary progress of the existing system. The mileage of pipes for filtered water was slightly extended and now amounts to 315.05 miles. The average daily consumption of filtered water was 20,684,393 gallons against 20,638,212 in the previous year, and the estimated daily consumption per head was 34.01 gallons in the town proper and 19.86 in the added area. The gross cost per 1,000 gallons was 2.66 annas.

The daily supply of unfiltered water decreased from 5,461,823 to 4,778,899 gallons, the consumption per head on a population of 436,393 being 10.95

As regards drainage, the extensive improvements in the sewage and storm water outfalls of the town and suburbs and the provision of a system of sewers for the suburbs are at present in hand under contract, and are not dealt with in this Report. The work of the Engineer's Department in this respect was confined to keeping in repair and reconstructing the existing 200 miles of public sewers. Three hundred and twenty premises were connected with the

public sewers during the year, raising the total number to 30,168.

13. Health of the Town. — Unfortunately the vital statistics for the year have been considerably complicated by the large exodus to which reference has so frequently been made in this review. The calculations are based on the census figures of 1891, but what the actual resident population was can only be guessed at. It is, however, stated that the year was a healthy one, and,

except for plague, it was not marked by the outbreak of any epidemic. The birth-rate was exceptionally low, being only 13.9 per 1,000 against a previous quinquennial average of 17.92. The birth-rate in Calcutta is always far lower than in the mufassal, owing to the small proportion of females and the custom among women of returning to their native place in order to give hirth to a child. The latter tendency was of course greatly strengthened by the fear of plague.

The death-rate was 29.8, the average of the previous five years being 34.80 and the provincial birth-rate for the year being 26.57. The mortality in the canal and suburban area shows a remarkable decrease from 44.7 in the previous year to 35.5 in the current one. The unhealthy condition of the canal area is a matter that calls for serious attention, and the Lieutenant-Governor would be glad to receive a special report showing what has been done and what it is proposed to do in the future to apply a remedy. The figures of infant mortality—always lamentably high in Calcutta—present some curious features. Among infants under 1 year of age the death-rate was 368.5 per mille, which is very far below that of the five years' average (437.5), though nearly double the provincial rate for the current year (192.35). But among Muhammadans it stands at the enormous figure of 634.5, while among Christians it is as low as 217.7. The Health Officer is unable to suggest any difference in the conditions of life of these two classes which will sufficiently explain the extraordinary excess of mortality among Muhammadans.

The mortality from fevers was 6,060 as compared with the average of the previous decade of 8,426. The Health Officer regards this decrease with satisfaction, as tending to allay the fears which had been felt that the high mortality of recent years from this cause has been due not to a cyclical wave of increased intensity, but to deterioration of the site of the town itself. In his next sentence, however, he qualifies the expression of satisfaction by stating that after the appearance of plague many people registered deaths under other causes which would in other years have been registered under fevers. It will, therefore, be necessary to await a return to normal conditions in order to form a definite opinion on the subject. As the result of experiments which have recently been made on the theory of causation of malarial fevers by mosquitoes, the Health Officer suggests that an endeavour should be made to exterminate them in their breeding grounds. He, however, expresses himself with caution as to the probable results. The mortality from cholera was 665 only, against an average of 2,181 for the previous nine years; and there was an equally satisfactory absence of small-pox, the deaths from this cause numbering

Vaccination was greatly hindered by the violent opposition to preventive inoculation against plague, which led to some of the vaccinators being mobbed and assaulted as inoculators, and made it necessary to practically suspend work for nearly three months. In consequence, the number of persons vaccinated fell from 21,620 to 13,225, of which 11,569 were primary and 1,686 revaccinations. Of operations in which the results were ascertained, the proportion of successful cases was 99.07 per cent. in primary cases and 23.68 in revaccinations. 3,198 infants under 1 year old were vaccinated, giving a ratio of 33.55 per cent. on the birth-rate for the year. A scheme for the reorganization of the Vaccination Department was drawn up by the Health Officer with a view to remedying the defects in the existing system; and has

received sanction since the close of the year.

14. During the year the Conservancy Department was transferred from the charge of the Health Officer to that of the Engineer. The change, however, was not found to work satisfactorily, and was cancelled after two months.

In conservancy a reform has been introduced, which it is hoped may prove effectual. Instead of the administrative unit being the ward, with a host of petty and irresponsible subordinates to each, it is now the block, or subdivision of a ward, in charge of a single responsible sarker. The Health Officer, while expressing an opinion that the system is thoroughly sound in principle, notes that its weak point is its dependence on the sarkars, who, as at present appointed, "have very little aptitude for their work, and appear to associate their interests rather with those of the coolies than with those of the authorities." This admission is not very creditable to the supervision exercised by the

officers of the Health Department, and the Lieutenant-Governor hopes that the latter will realize that the success or failure of this all-important branch of municipal administration must depend on the amount of energy and attention devoted by themselves to supervising their subordinates. If proper attention is given by them, the new scheme can hardly fail to effect a much-needed improvement; if it does not do so, it will at least be obvious in future with whom the responsibility for its failure must rest. Proposals were submitted by the Health Officer for still further and more radical reforms in the establishment. These, however, did not receive the sanction of the Corporation.

Another important improvement has been the introduction of an afternoon, in addition to a morning, conservancy service. This is much appreciated by the public. It should be noted that the new scheme has as yet hardly had time to get into working order, and that its operations have been hampered

by scarcity of labour during the past year.

It is hoped that in the future the greatest vigilance will be exercised in keeping this most important branch of administration up to a proper level of efficiency, and that the state of the public streets in Calcutta will no longer give reason for the severe, but well-merited comments which have been so constantly made upon it in the past.

15. During the year there were two outbreaks of plague in Calcutta, the first, which was restricted in incidence, in April, and the second, which was most extended and persistent, in the middle of the cold weather of 1898-99. By orders issued under the Epidemic Diseases Act of 1897, measures for the prevention and extirpation of plague in Calcutta are entrusted to the Chairman alone, assisted by a special staff, and are not subject to the control of the Commissioners. The matter is therefore not dealt with in the present Report and falls outside the scope of this review. It would be out of place on the present occasion to discuss the policy which has actuated the Government in dealing with plague in Calcutta, the measures which were from time to time adopted, or the success or failure which attended them. This will be done when the history of plague in Bengal comes under review. For the present the Lieutenant-Governor desires to avail himself of the opportunity of publicly expressing his acknowledgments to those whose efforts have contributed to keeping the epidemic within narrow bounds. Amongst officials are the successive Chairmen, Mr. Greer and Mr. Bright; Major Evans, the Chief Plague Officer, and Dr. Hossack, one of his Assistants. The character of their duties demanded a constant patience and kindly temper, and this difficult but essential combination of qualities all four possessed and showed. Many of the Municipal Commissioners gave excellent help on the Vigilance Committees, which formed the first of the plague measures in Colonta. which formed the first of the plague measures in Calcutta. Amongst private gentlemen, two were eminent—Babu Hari Ram Goenka and Dr. Rai Koylash Chandra Bose Bahadur. The former, a Municipal Commissioner and an active member of the Vigilance Committee of his Ward, not merely subscribed large sums towards the establishment of an admirable hospital for his fellow-caste men, but by his activity and influence contributed largely to secure the cooperation of the public with the efforts of the authorities. The latter rendered invaluable service in bringing to light the progress of the disease, and by his sympathy and tact in winning over the ignorant to acquiesce in the measures necessary for its suppression.

By order of the Lieutenant-Governor of Bengal,

E. N. BAKER,

Offg. Secretary to the Govt. of Bengal.

WEATHER AND CROP REPORT.

For the week ending the 20th November 1899.

Burdwan.—No rain. Weather seasonable. Condition of aman paddy and sugarcane good. Sowing of rabi crops continues. Cultivation of potate going on. Fodder and water sufficient. Common rice selling as follows:—

galetic Commence of the				Srs.	
Sadar				15	per rapee.
Kaina	ver a	***	***	131	took wonger
Katwa	•••	•••	**************************************	15	Per rupee.
Raniganj	•••			14	J

Birbhum.—No rain. Weather seasonable. Harvesting of aus finished. Sowing of rabi continues. Prospects of winter rice good. Price of common rice at Sadar and Rampur Hat 15 seers per rupee. Fodder sufficient.

Bankura.—No rain. Weather seasonable. Harvesting of nuan paddy nearly finished. Sowing of wheat continues. Other standing crops doing well. Sporadic cases of cow-pox reported. Fodder and water sufficient. Price of common rice at Bankura 16 seers, and at Vishnupur 15 seers 10 chitaks per rupee.

Midnapore.—No rain. Weather seasonable. Prospects of winter rice very good. Harvesting begun. Rabi crops being sown. Cattle-disease reported from Jhargram and Garhbeta. Fodder and water sufficient. Common rice sells as follows:—

			Srs.	ch.	
Sadar	1 600	 	16	0	per rupee.
Contai	•••	 	15	0	ner runes
Tamluk	•••	 	14	31	(por rupes.
Ghatal		 	16	0	

Hooghly:—No rain. Weather seasonable. Prospects of crops good. Common rice sells at 14 seers 1 chitak per rupee.

Howrah.—No rain. Weather seasonable. Harvesting of aman commenced in places. Sowing of rabi still going on. Fodder and water sufficient. Common rice sells at 13½ seers per rupee.

24-Parganas.—Rainfall nil. Weather seasonable. Prospects of crops good. Harvesting of aman on high lands continues. Sowing of rabi crops going on. No cattle-disease reported. Fodder and water sufficient. Common rice sells as follows:—

				Srs.	
Salar				12	per rupee.
Barasat	***		****	15	Cont minos
Basirhat	•••	•••	•••	171	(per rupee.
Diamond Ha	rbour		100	144]

Nadia.—No rain. Weather seasonable. Prospects of standing crops good. Sowing of rabi still continues. Harvesting of aman commenced. Fodder and water sufficient. Price of common rice stationary.

Murshidabad.—No rain. Weather seasonable. Prospects of aman favourable. Kalai doing well. Sowing of rabi continues. Harvesting of early aman commenced. No cattle-disease. Fodder and water sufficient. Common rice sells as follows:—

			ors.	
Sadar		 	15) attacks
Jangipur Kandi	•••	•••	15	per rupee.
Kandi	***	 •••	$17\frac{1}{2}$)

TALISME STORY

Jessore.—Rainfall nil. Weather seasonable. Early aman paddy is being harvested. Sowing of rabi crops going on. No cattle-disease reported. Fodder and water sufficient. Common rice sells as follows:—

CHARL WY THERE	with an embed			Srs.	
Sadar		•••	Transfer de San	16)
Jhenida	*****		•••	18	
Magura	***	•••	•••	17	per rupee.
Narail		Manager 1	10 10 TO 10	16	Format Condin
Bangaon		•••	•••	17	

Khulna.—Rainfall nil. Weather seasonable. Prospects of crops continue favourable. Cultivation of rabi crops continues. Fodder and water sufficient. Common rice sells as follows:—

Rajshahi.—No rain. Weather seasonable. Prospects of crops good. No cattle-disease. Fodder and water sufficient. Common rice selling at 17²/₄ seers per rupee.

Dinajpur.—No rain. Weather seasonable. Standing crops fair. No cattle-disease. Fodder and water plentiful. Price of rice at Sadar 18 seers and at Thakurgaon 16 seers per rupee.

Jalpaiguri.—Rainfall nil. Weather seasonable. Haimanti paddy in good condition. Transplantation of tobacco and sowing of mustard going on. Common rice sells at 143 seers per rupee. Fodder and water sufficient.

Darjeeling.—No rain. Weather seasonable. Hills—Haimanti paddy, bara marua, kalai, phaphar, tori, wheat and barley progressing. Terai—Haimanti paddy, potatoes, and mustard promising well. Coarse rice sells as follows:—

Bhutta sells at Darjeeling 21 seers and at Kalimpong 28 seers per rupee.

Rangpur.—No rain. Sowing of rabi crops in full swing. Prospects of crops good. Common rice selling at 16 seers per rupee. Fodder and water sufficient. Cattle-disease prevailing in Nilphamari.

Bogra.—No rain. Cutting of paddy and rabi sowings commenced. Prospects good. Fodder and water ample. Common rice selling at 184 seers per rupee.

Pabna.—No rain. Weather seasonable. Prospects of crops good. Winter paddy being harvested. Price of common rice 15 seers 3 chitaks per rupee.

Dacca.—Rainfall nil. Weather seasonable. Harvesting of paddy going on. Prospects of standing crops good. Folder available. No cattle-disease. Common rice sells at 16 seers per rupee.

Mymensingh.—Rainfall nil. Weather cool and dry. Prospects of crops good. Water and fodder ample. Common rice sells at 17 seers per rupee.

*Faridpur.—No rain. Weather seasonable. State and prospects of standing crops generally good. Common rice selling at 16 seers per rupee.

Backergunge —Rainfall nil. Weather seasonable. Prospects of crops good. Common rice sells at 14 seers per rupee.

Tippera.—No rain. Weather seasonable. Aman harvest commencing. Rabi being sown. Average price of common rice 171 seers per rupee.

Noakhali.—No rain. Prospects of crops good. Cattle-disease at Chagalnaya abated. Veterinary Assistant allowed to leave. Fodder and water good. Common rice (aman) 15 seers and (aus) 18 seers per rupee.

Chittagong.—Rainfall nil. Prospects of crops favourable Water and fodder sufficient. Common rice 16 seers per rupee.

Patna.—No rain. Rabi sowings continue in some places. Rabi already sown germinating well. Prospects of paddy fair. Condition of cattle good. Water-supply for cattle plentiful. Common rice in Patna sells at 18 seers per rupee.

Gaya.—No rain. Harvesting of paddy going on. Rabi doing well. Poppy being sown. Common rice selling at 16 seers per rupee.

Shahabad.—Rainfall nil. Rabi being sown. Paddy harvesting commenced. Fedder and water abundant. Sixty-five cases of cattle-disease in Sasaram. Common rice at Sadar 12 seers per rupee.

Saran.—No rain. Weather seasonable. Harvesting of paddy commenced in places. Rabi doing well. Poppy sowing nearly completed; germination excellent. Average price of common rice 13 seers 12 chitaks and of makai 14 seers 8 chitaks per rupee.

Champaran.—No rain. Winter rice ripening; prospects fair. Rabi and poppy sowings in progress and germinating well. Price of common rice 14½ seers and of maize 17 seers per rupee.

Muzaffarpur.—Rainfall nil. Rabi sowings approaching completion. Prospects favourable. Prices are—Common rice $13\frac{1}{4}$ seers, wheat 13 seers, barley $16\frac{1}{2}$ seers, makai $16\frac{1}{4}$ seers, gram $15\frac{1}{2}$ seers, rahar $15\frac{1}{2}$ seers, and marua 20 seers per rupee.

Darbhanga.—No rain. Weather seasonable. Prospects of standing crops good. Rabi sowings going on. Fodder and water sufficient. Cattle-disease reported from Sadar and Madhubani. Common rice sells as follows:—

Monghyr.—No rain. Weather seasonable. Rabi sowings going on. Paddy being harvested. Sugarcane-pressing commenced. Standing crops doing well. Poppy sowings progressing satisfactorily; prospects hopeful. Common rice sells as follows:—

Monghyr
Beguserai
Jamui
...
Beguserai
...
Beguserai
...
12 10
12 10
12 10
14 0
14 0

Bhagalpur.—No rain. Weather seasonable. Early aghani paddy being harvested. Rabi sowings continue. Fodder and water plentiful. Cattle-disease continues in the interior of the district. Price of common rice going down owing to an influx of new rice into the market. Common rice sells as follows:—

Purnea.—Rainfall nil. Weather seasonable. Condition of aghani rice good. Rabi sowings progressing. Sugarcane being cut. Tobacco being transplanted. Cattle-disease prevails in thana Raniganj. Fodder and water sufficient. Common rice sells as follows:—

Sadar 18
Kishanganj 17
Aravia 18

Malda.—Rainfall nil. Weather seasonably cool. Sowing of rabi still continues. Prospects of crops good. Fodder and water sufficient. Cattle-pox reported from Manikchak thana. Coarse rice selling at 17 seers per rupee.

Sonthal Parganas.—Rainfall nil. Weather seasonably cold. Harvesting of early paddy in progress. Prospects of all crops good. Cattle-disease in Rajmahal. Fodder and water sufficient. Average price of common rice 13 seers 14 chitaks and of Indian-corn 20 seers per rupee.

Cuttack.—Rainfall nil. Weather seasonable. Laghu sarad being reaped. Guru sarad in ear. Arhar and sugarcane growing. Condition of men and cattle generally good. Fodder and water sufficient. Common rice sells as follows:—

Srs. ch. Cuttack 15 Jajpur 17 ... *** per rupee. Kendrapara 180-176-17 18 6 ... *** 16 0

Balasore.—Rainfall nil. Sarad ripening. Asu being harvested. Rabi crops and sugarcane growing well. Prospects of crops good. Rice sells at 18\frac{2}{4} seers per rupee in the interior, and at 16 and 18 seers per rupee at Balasore and Bhadrak respectively. Cattledisease reported from Basudevpur Circle. Fodder and water sufficient.

Angul.—No rain. Laghu rice being harvested. Rain wanted for paddy planted late and for rabi crops. Rabi sown before the October rain doing well. Gathering of biri in progress. Common rice sells at 15 seers in Angul and $8\frac{1}{4}$ to 9 seers in the Khondmals.

Puri.—Rainfall nil. Weather seasonable. Laghu sarad being harvested. Bara sarad in flower. Kulthi, biri, and other pulses thriving. Sugarcane being pressed. Fodder and water sufficient. Common rice sells as follows:—

Sadar 13 2 Khurda 14 0 per rupee. 14 2

Hazaribagh.—Rainfall nil. Weather seasonable. Harvesting of rice in progress. Common rice sells at 12 seers per rupee.

Ranchi.—Rainfall nil. Weather seasonable. Harvesting of winter rice continues. Rice sells at Ranchi 11 seers, and in the interior 14 seers 13 chitaks per rupee. No cattle-disease reported. Fodder and water sufficient.

Palamau.—No rain. Weather seasonable. Paddy and til being harvested; outturn poor excepting in some places. Rabi sowing much below normal where there was no rain. Prices at Sadar are—Rice 11 seers, gram 15 seers, makai 14 seers, barley 17 seers, wheat 12 seers, and marua 17 seers per rupee. Cattle-disease reported from a few villages. Fodder and water sufficient.

Manbhum.—Rainfall nil. Weather seasonable. Bhadoi crops fair. Winter rice an average crop. Rubi crops promise well. Cattle-disease reported from thanas Purulia, Tundi, and Topchanchi. Fodder and water sufficient. Average price of common rice at Sadar 13 seers 10 chitaks and at Gobindpur 12 seers per rupee. Supply sufficient.

Singhbhum.—No rain. Rain wanted for rabi. Common rice sells at 141 seers per rupee.

General Summary.—There was no rain during the week. The general prospects of the crops continue good except in some parts of the Chota Nagpur and Orissa Divisions. The winter rice crop is maturing, and on the high lands the harvesting is in progress. The rabi and all other cold-weather crops, including poppy, are being sown and germinating well, except in Chota Nagpur and Angul. The price of common rice shows a tendency to fall with the appearance of the new crop into the market. There is plenty of fodder in every district, and only a few cases of cattle disease are reported.

By order of the Lieutenant-Governor of Bengal,

F. A. SLACK,

Offg. Secretary to the Govt. of Bengal.

REVENUE DEPARTMENT, The 21st November 1899.



PRICES-CURRENT (retail) of Food-grains and Salt in the Head-

						WHEAT.		BARLEY.				RICE, BEST SORT.					, COMM	JOWAR OR CHOLUM.			
Number.		DISTRICTS,		Decount votures	1100011	Next preceding return.	Corresponding return of last year.	Present return.	Next preceding return.	Corresponding return of last year.	Present return.		Next preceding return.	Corresponding return of last year.		Present return.	Next preceding return.	Corresponding return of last year.	Present return,	Next preceding return.	Corresponding return
	1	BENGAL.		S. (Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	S. Ch.	s. c	h.	S. Ch.	S. Ch	5 .	Ch.	S. Ch.	s. Ch.	s. Ch	S. Ch.	s. c
1	1	Buidwan		12	0	12 0	14 8				11	6	11 0	10 0	14	8	13 0	18 8	-		
	2	Birbhum		13	4	13 0	13 8				12	0	12 0	12 0	15	0	14 4	16 8			
BURDWAN DIVISION,	3	Bankura		10	0	10 0	13 12				10	0	10 0	12 8	16	0	15 0	17 8			
WAN L	4	Midnapore		13	0	10 0	12 0				11	0	11 4	11 0	16	0	17 0	14 0			
BURD	5	Hooghly		10	0	10 0	12 0				7	8	7 8	7 8	12	8	11 8	10 8			
1	6	Howrah									10	8	10 12	9 8	13	0	12 12	12 12			
,	. 7	24-Parganas				1194					8 1	2	8 8	7 0	13	0	12 0	13 0			
N.	8	Calcutta		9	6	10 10	13 0	18 0	12 4	16 0	8	0	7 9	7 9	11	6	10 10	11 4		12 4	16
DIVISION.	9	Nadia				13 5	13 5	22 13	22 14	_	7	4	6 10	6 10	12	13	12 10	13 5			
	10	Murshidabad		16	.5	14 0	nali.				900		10 0	10.0	10	0	16 0	10 0			
PRESIDENCY	11	Jessore		9	0	Ganga 12 0 9 0	17 12)	22 0 12 0	20 0 10 0	12 0	100	0	12 8 10 8	12 0 11 0	18	0	16 0 16 0	18 0 19 0	-		
	12	Khulna									13	0	13 0	14 0	16	0	15 0	18 8	-		
		Daishahi		15	0	16 8	16 8	26 4	24 0	22 8	10	10	10 8	13 8	18	0	17 4	17 4			١.
	13	Rajshabi				9-9-6t.		13 5						12 0	18			18 0			
SION.	14				0	9 0	12 8		4 1			0	5 0	5 8	13			18 0		"	
RAJSBAHI DIVISION,	15	Jalpaiguri			0	7 0	8 0	8 0	8 0	9 0	5		5 .0	5 8		0	9 8	14 0	-	"	
JSHAH	16	Rangpur				11 0	11 0					8	8 0	7 8			14 0		-	"	
RA	17	Bogra			4		15 0		["	"	12		12 0	10 8				18 0		-	
	18	Pabna				9 0		35 0	35 0	22 8		8	7 0	6 0				18 12	"	-	
	\19	. Auta		10	0	10 8	13 0	00 0	30 0	22 8		0	, 0	0 0		10		10	-	-	
ON.	20	Dacca		9	2	10 0	13 0	32 0	32 0	26 0	10	0	10 0	12 0	18	0	18 0	19 0		-	
DACCA DIVISION.	21	Mymensingh	•••	10	0	10 0	13 8				14	0	14 0	10 0	16	0	16 0	13 0	-	-	-
PACCA	22	Faridpur		20	0	15 0	19 0	35 0	28 0	18 0	6	0	6 0	8 0	16	0	16 0	20 0		-	
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A. In the subdivisions the retail prices of salt per rupee are:—Kalna 10 seers 10 chittacks; Katwa 10 seers 15 chittacks; Ranigani 10½ seers.

B. At Rampur Hat the retail price of salt is 10½ seers per rupee.
C. At Vishunpur the retail price of salt is 10½ seers per rupee.
D. In the subdivisions the retail prices of salt per rupee are:—Contai 9 seers; Tamluk 10½ seers; Ghatal 11½ seers.
E. In the subdivisions the retail price of salt per rupee are:—Serampore 10½ seers; Jahanabad 10 seers 9 chittacks.
F. At Ulubaria the retail price of salt is 10 seers 10½ chittacks per rupee.
G. In the marts in the interior of the district the retail prices of salt per rupee are:—Chetla 10¾ seers; Barasat 11½ seers; Baduris 10 seers 10 chittacks; Magrahat 10 seers 10½ chittacks.

H. In the subdivisions the retail prices of salt per rupee are:—Kushtia (Bahadurkhali) 10½ seers (panga); Chuadanga 11 seers (panga); Meherpur 10 seers (karkatch); Ranaghat 10½ seers (crushed).

In the subdivisions the retail prices of salt per rupee are:—Lalbagh 11 seers; Kandi 11 seers; Jangipur return not received.
J. In the subdivisions the retail prices of salt per rupee are:—Jhenida 10 seers; Magura 9½ seers; Narail 10 seers; Bangaon 10 seers 10 shittacks.

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K. In the subdivisions the retail prices of salt per rupee are:—Bagerhat 9 seers; Satkhira 11½ seers.

In the subdivisions the retail prices of salt per rupee are:—Nator 10½ seers; Naugaon 9 seers 10 chittacks.

M. In the Alipur Duars the retail price of salt is 8 seers per rupee.

N. Retail prices of salt (panga) at Kurseong 8 seers and Siliguri 9 seers per rupee.

O. In the subdivisions the retail prices of salt per rupee are:—Kurigram 8 seers; Gaibanda 10 seers; Nilphamari 10 seers.

At Sirajganj the retail price of salt is 11½ seers per rupee.

In the marts in the interior of the district the retail prices of salt per rupee are:—Madanganj 11 seers 6 chittacks;

Manikganj 9 seers; Mirkadim 11 seers 6 chittacks.

In the subdivisions the retail prices of salt per rupee are:—Kishorganj 10 seers; Jamalpur 10 seers; Kagmari 3 seers; Netrokona 9½ seers.

S. In the subdivisions the retail prices of salt per rupee are:—Goalundo 10 seers; Madaripur 10½ seers.

T. In the subdivisions the retail prices of salt per rupee are:—Pirojpur 8 seers; Patuakhali 9 seers; Bhola 9 seers.